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## Transport Administration in Tropical Dependencies

By George V. O. Bulkeley, C.B.E., M.I.Mech.E.

With Chapters on Finance, Accounting, and Statistical Method

IN COLLABORATION WITH

Ernest J. Smith, F.C.I.S.

(formerly Chief Accountant, Nigerian Government Railway)

190 pages Medium 8vo. Full cloth

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THE RAILWAY GAZETTE

33, TOTHILL STREET, WESTMINSTER, S.W.1

### Sir Stafford Cripps' First Budget

WITH the avowed intention of securing a real and substantial surplus, and adjusting taxation so as to provide a greater incentive to production, Sir Stafford Cripps in his first Budget produced proposals which, although facing realistically the needs of the times, is unlikely to be particularly popular with any section of the people. His income tax remissions, although they will be welcomed by the lower income groups, and more so by those dependent on small pensions, are offset in most cases by higher taxation on tobacco, beer and spirits. A new and unwelcome feature of the Budget is a special "once-for-all" levy, based on investment income in excess of £250 a year and steeply graded in its incidence, where the total income is greater than £2,000. This is a thinly-disguised form of capital levy so far as larger incomes are concerned, and little reliance will be placed on the reiterated assurances that it, or a similar measure, will not be repeated. The actual overall surplus for which Sir Stafford Cripps budgets is £330 million, which should make a useful contribution to his anti-inflation campaign.

\* \* \*

### Government Anti-Monopoly Bill

The terms of the Monopoly (Inquiry & Control) Bill provide for the setting up of a commission with wide powers of investigation into monopoly or restrictive practices of trade and industry and with powers to make recommendations and to find where practices "operate against the public interest." Where the commission establishes that there is a monopoly, nine Government departments have powers to make orders prohibiting the making or carrying out of agreements, boycotts, conditional sales, and preferential terms. The scope of the Bill is limited to restrictions by employers, and trade union practices, however restrictive their effect, are specifically excluded. It may seem perhaps a peculiar measure to have been introduced by the present Government, which has been zealous not only in promoting huge monopolies in transport, coal, electricity, and gas, and which is believed to be still contemplating a similar process for iron and steel, but which also has shown a preference for dealing directly with trade associations rather than with a mass of individual undertakings.

\* \* \*

### B.T.C. Wagon Compensation Stock

On April 2 particulars were advertised of an issue of British Transport 3 per cent, guaranteed stock 1968-73, which is being issued at the rate of £100 of stock for each £100 payable in compensation for the acquisition of some 370,000 privately-owned railway wagons. It will be seen that compared with the original issue of Transport 3 per cent. stock, which was dated 1978-88, the Government has found it necessary to shorten and narrow the dates of the new issue. Nevertheless, the stock opened with a discount of 1½ points. Since October last 3,550 individual claims for compensation by railway wagon-owners have been handled by the Railway Clearing House on behalf of the Commission. The amount payable for various types of wagons according to age was incorporated in the Transport Act, 1947. Some £30 million is being paid in stock and £1 million in cash in settlement of smaller claims. This represents final settlement of over 98 per cent. of all privately-owned wagons in use. Another £13½ million is reserved for National Coal Board wagons and £500,000 in respect of an estimated 5,000 wagons for which claims have not yet been lodged, making £45 million in all.

\* \* \*

### Provincial Buses not Nationalised

The position of passenger road transport outside the London Area, under the Transport Act, seems to be the subject of widespread misapprehension in some quarters, and the wrong impression exists, particularly among some sections of the public, that bus services are already owned by the State. It was therefore particularly appropriate that Mr. Raymond Birch, when presiding at the recent annual meeting of the Yorkshire Traction Co. Ltd., should have made a clear statement of the current position. He emphasised that the services

of the company will continue to operate under the present management until and unless some "area scheme" prescribed by the Act is evolved and put into operation. He pointed out that such a scheme must be justified, against any objections that may be made, first before a local inquiry, and later (if the objections persist) before Parliament, on the grounds that the proper co-ordination of local traffic needs cannot be effected otherwise. He does not believe that such grounds could be established in regard to the area served by that company, which has formal agreements for co-ordination with Doncaster, Huddersfield, Rotherham, and Sheffield Corporations, and working arrangements with all other operators, municipal, company, and independent. The system of road and rail co-ordination continues to function, with Railway Executive officials taking the place of the former railway company representatives. In a recent press conference, the Chairman of the British Transport Commission seemed to indicate that such "area schemes" are not an immediate prospect, and Mr. Birch expressed the hope that the Government will exercise restraint.

#### Afghanistan Improves Communications with Pakistan

Afghanistan has at last realised the desirability of modern communications with the outside world, as well as irrigation and hydro-electric development internally. So much is clear from the report in our Overseas columns this week announcing that work has begun on a £4½-million comprehensive undertaking with these ends in view. Hitherto, traffic by the trans-frontier roads to and from the North Western Railway rail-heads in the Khyber Pass and at Chaman, beyond Quetta, has been carried mainly by camel, though motor vehicles also have used these roads in favourable weather conditions. Both are now being converted into all-weather highways to Kabul and to Kandahar and the Helmund River, respectively. The latter, which is to be dammed near the road terminus, flows through desert to the Afghan-Persian frontier, and thence into the Helmund Lake in Seistan, a vast fertile oasis surrounded on all sides by hundreds of miles of desert. The Persians are naturally apprehensive lest the diversion of the water in Afghanistan may reduce its level in their country and ruin Seistan, through which, incidentally, passes the wartime Indian aid-to-Russia rail and road route via Zahidan and Meshed.

#### Restaurant Car Meals

Some rather ungenerous comment in the *Evening Standard* of March 30 on the standard of meals supplied in dining cars was followed a few days later by the publication of several letters in that newspaper all critical of the service provided. The *Evening Standard* had suggested that Sir Cyril Hurcomb "ought to demand an immediate improvement in the standard of meals supplied in dining cars," and gave some examples of the type of meal provided. It criticised particularly two meals served on trains of the London Midland Region and the Western Region, but said that: "Some chefs, particularly in the Southern Region where poultry occasionally appears, have shown that better menus are possible. If one Region can do it, the others should be made to do it too." The author of the article made no mention of the catering disabilities under which the railways in common with other providers of food suffer at the present time. They are equally affected by rationing restrictions and shortages of foodstuffs. Our own experience does not suggest that the quality of meals served on trains is any worse than those obtainable at a similar price in many other places.

#### Railway Catering Services

That many spheres of railway activity are taken for granted by the travelling public, has been cited as the highest tribute to their efficiency; it is significant, however, that perhaps partly due to difficulties imposed by the war, this familiarity often has been followed by popular abuse. Always taken for granted, is that long-suffering branch of railway catering, the refreshment room, frequent reference to whose failings has played its part in fostering the present-day conception of dingy Victorian surroundings and stale buns. Mr. E. W. Belcher, in his paper "Southern Region Catering Services," given to the British

Railways (Southern Region) Lecture & Debating Society, on March 18, whilst admitting that many refreshment rooms require modernising and re-designing, pointed out that these rooms not only meet a public need, but are handicapped by their present trade being greatly in excess of that expected at their time of construction. As a measure of the service these rooms provide, it is significant that in 1947, on the Southern Railway, 17½ million cups of tea and coffee were provided, as well as 1½ million meat pies and 250 tons of bread. An abstract of Mr. Belcher's paper is on page 442.

#### Rebuilding Twelve-Mile River Bridge, C.N.R.

To double its power output, the DeCew hydro-electric plant, near St. Catherine's, Ontario, has been enlarged recently, and Twelve-Mile River, which forms its tailrace, has had to be widened and deepened. As the Hamilton-Niagara Falls main line of the Canadian National Railways crossed the valley of this river on a double-line viaduct with shallow foundations, the viaduct has had to be rebuilt, as described on page 432 of this issue. The structure as originally built and as now reconstructed is shown by the diagrams on that page. The superstructure, dating from 1902, was in good order, and up to the present day has carried high-speed heavy loadings; and this fact, coupled with the necessity for maintaining the uninterrupted flow of traffic, dictated the policy pursued. This entailed the retention of the 65-ft. and the three 100-ft. spans on the original alignment—though they were moved along it longitudinally—and also one of the abutments; and the construction of four new deep-foundation piers of unusual design under the spans, and the provision of a new 58-ft. span and one new abutment. Details of the design of the piers and of the work involved will be found in the article describing the reconstruction, which had to be planned with even more than normal care and is of unusual interest.

#### Polhill Tunnel Re-laying

In our last week's issue we published an illustrated description of the re-laying with prefabricated track of Polhill Tunnel on the main London-Dover route of the Southern Region. Last Thursday representatives of all the departments concerned in the job met at dinner at the Charing Cross Hotel to celebrate the completion of the work, which was the first big work of its kind undertaken since nationalisation. Mr. John Elliot, Chief Regional Officer, presided, and was supported among others by Mr. V. A. M. Robertson, Chief Civil Engineer, and Mr. S. W. Smart, Superintendent of Operation. The widespread repercussions of works of this kind, which necessitated the closing of the tunnel to traffic for three weeks, are not always appreciated, but this informal dinner, which was held at the suggestion of Mr. Elliot, brought together representatives of those who had had to re-route the trains, those who had been responsible for the actual work within the tunnel, those who had prefabricated the track, and those who had provided the necessary trains, motive power, and so forth. All the speakers commented on the co-operation between the various departments involved which had helped to a successful conclusion a "combined operation" in the best Southern tradition.

#### Numbering of Locomotives

The new locomotive numbering system which is being introduced on British Railways was explained in our last week's issue. About 20,000 locomotives will be dealt with as they pass through the repair shops. In general, Southern Region locomotives are to have 30000 added to existing numbers, London Midland Region 40000, and Eastern and North Eastern Regions 60000. The Western Region is to retain existing numbers for steam stock, but on all forms and dockets, apparently, in the case of the other Regions it will be necessary to write five figures for every locomotive, although there are only 20,000 of them in all. Even electric locomotives are to be 20000 and upwards, although there are little more than a dozen in the country, and even if their number were multiplied by ten the locomotives could not be moved from their electrified section. It is not clear why the re-numbering of locomotives should have been given such high priority by the Railway

Executive, for there is no likelihood that steam locomotives will be used indiscriminately like wagons. The principal aim of the locomotive running staffs is to secure the return of locomotives to the particular sheds to which they are assigned. If a similar scheme of numbering were to be applied to wagons the figures to be recorded would, indeed, be large. The extra printing and writing which will be caused to many is no light matter, and a good deal of expenditure also will be incurred.

#### New Tank Locomotives for Burma

The Burma Railways have placed an order for twenty-eight tank locomotives with Robert Stephenson & Hawthorns Limited, of Newcastle-on-Tyne. These metre-gauge locomotives, which have the 2-6-4 wheel arrangement, are good examples of powerful machines built under severe limitations of axle-load and rigid wheelbase. Although the maximum load on any axle is less than 10 tons, a tractive effort of 17,613 lb. is obtained at 85 per cent. boiler pressure, when the adhesive ratio is 3.668. As the locomotive was to be capable of negotiating curves of 250 ft. radius, the rigid wheelbase had to be restricted, and the adhesion from six coupled wheels had to suffice where, in easier circumstances, eight might have been used. The design, which is a modified version of an earlier type built in Germany in 1929, is well suited to the duties (largely shunting) for which the engines are intended. The driving wheels are small, and as the maximum cut-off is 88 per cent., great power is available for starting. The comparatively large diameter of 8 in. for the piston valves for the 15 in. x 22 in. cylinders should minimise steam admission losses. The provision of telescopic dust shields, surrounding the "body" of each axle between the axleboxes, indicates the difficult working conditions to be faced.

#### The Value of Prompt Decision

"WHAT Life has Taught Me" is the title of a book\* of essays collected and edited by Sir James Marchant. The authors are 25 men and women who have made their mark in various spheres and have reached an age when they can play the part of Nestor. Most of them write fragments of autobiography and there is much sound advice on many matters scattered through their pages, with an occasional lapse into platitude. The Very Rev. W. R. Inge tells how, when he lies awake at night, all the wrong and foolish things he has done in 80 years come trooping by and grinning at him. E. V. Knox does not take himself so seriously and quotes some light-hearted verses which he composed about his misdeeds "as a fearful lad, on all the railways far and wide." When the Lord Chancellor says that life has taught him that "the right course is to search for the gold in one's fellow men," we cannot help wondering how far he gave effect to that precept when he was Attorney-General! There is an honest ring in Bernard Darwin's apology for devoting 50 or 60 years to golf—"There is something to be said for making your work out of your fun. To spend a good part of your life doing the thing you happen to like best, in pleasant places and in pleasant company, seems to me not unenviable." Of course that is so, especially when you can write charming articles about your favourite game to *The Times* and *Country Life*.

We mention these four essays to show how widely the contributors to the book differ in the treatment of their theme. In a paper of outstanding interest to railwaymen, Lord Ashfield takes a line of his own. Without saying a word about his own career, he goes straight ahead to discuss a question of vital consequence at the present time. He takes as his text the qualities needed by the men who are destined to fill the top posts in the large corporations which have become the main-spring of our social and industrial order, whether they are public utilities or private undertakings. No one is better qualified to speak on the subject.

In 1907 Lord Ashfield returned from America to act as General Manager of the Metropolitan District Railway and the "Tubes." He was then 33 years of age, and five years later became Managing Director of the Underground Group.

From 1916 to 1919 he was President of the Board of Trade, with a seat in the House of Commons, and, *ex officio*, was Chairman of the Railway Executive Committee. After the first world war he guided the development of the Underground until 1933, when he was the obvious choice for the chairmanship of the London Passenger Transport Board, which was established at that time. Last year he was elected a member of the British Transport Commission. Apart from his official duties, Lord Ashfield was a member of the Royal Commission of 1931 on Railways & Transportation in Canada; he also contrived to maintain wide interests in general business and to have contacts with academic bodies such as the Cambridge University Appointments Board.

From this exceptional experience in big affairs, Lord Ashfield concludes that a man called on to administer a great enterprise must have "character." Learning, too, is valuable, but the indispensable faculty is the gift of decision. "No organisation, great or small," he says, "can survive unless everybody in it knows that, both in matters of policy and daily administration, they can get clear binding decisions, without fumbling and procrastination." But decision is not enough; it must also be speedy. Any decision based on sound judgment is better than no decision at all. One cannot wait in every case for all the relevant facts. "It so often happens in real life that the decision taken on the basis of an incomplete knowledge of the facts turns out right in the end . . . and may well render proper and workable an imperfect and even wrong judgment."

These quotations will give an idea of Lord Ashfield's views. He proceeds to emphasise the point that a decision does not turn only on a knowledge of the material facts, but also on judgment of the reactions and outlook of the people who may have to act on the order, as well as those who may be affected by it. So the capacity for making decisions must be tempered by common sense or sagacity—"perhaps the most valuable all-round quality that those in charge of affairs can possess." To acquire sagacity, "those who aspire to high places must enlarge their experience by having many contacts . . . outside the immediate activity with which they are normally concerned." Wide reading is also indispensable for anybody who may be called on to carry great responsibilities. Of all types of literature, Lord Ashfield thinks that which affords most guidance to the would-be administrator is biography. Yet the precious gift of imagination which inspires all great leadership, is an innate quality hardly susceptible of cultivation. It is "essential to the healthy survival of any large institution," we are told, and remember that we have heard of Lord Ashfield's "intuitions" about London's passenger movement and how often they were confirmed by Mr. Frank Pick's impressions based on statistics.

After a few words of advice about fair dealing in the negotiations inseparable from the conduct of any large enterprise, Lord Ashfield turns to the question of high-grade work on paper. His finding is that "the proportion of even educated people capable of producing a good draft is disappointingly small." He suggests that reasonable skill in the use of words can be gained by studying works by writers who are recognised as stylists, and that facility in speaking may be improved at the same time as clarity in writing, lucidity of thought being intertwined with both the spoken and the written word.

Lord Ashfield winds up his thesis with the remark that every organisation must depend largely on the efforts of average human beings, even in the highest places. In the long run it is the personal qualities enumerated above that count, with two additions—freedom from self-importance and a sense of humour, coupled with a tolerance for the imperfections of human nature and a general willingness to give and take. Finally, those who aspire to higher administrative posts must be willing to work hard.

This acute analysis of a problem that is vital to the country's progress and prosperity could not have appeared at a more opportune time. Our future wellbeing will depend largely on the measure of success attained by the national authorities which Parliament has created to deal with civil aviation, coal, transport, and the supply of electricity. Recent happenings indicate that the three air corporations are not organised for quickness of decision. There is a feeling in some quarters that the National Coal Board has centralised work until it cannot handle its problems expeditiously. We doubt whether the

\* "What Life Has Taught Me," by twenty-five distinguished men and women. Introduced by Gilbert Murray, O.M.; selected and arranged by Sir James Marchant. Published by Odhams Press Limited, Long Acre, London. Price 10s. 6d.



scheme for organising inland transport embodied in the Act of 1947 will be effective as a means of getting things done. Neither do we think that the organisation of the Railway Executive, described in our March 19 issue, will be flexible enough to cut out too much consultation at a number of stages and bring matters to a head with the decisiveness that was usual when we had four main-line companies.

Lord Ashfield is one of the six members of the British Transport Commission and his essay will afford not a little satisfaction to the cynically minded. They will consider it, reading between the lines, in effect an indictment of the Commission and its several Executives as at present constituted. It is to be hoped that all Lord Ashfield's fellow members of the Transport Commission and the members of the Railway, London Transport, Docks & Inland Waterways, Road Transport, and Hotels Executives will read his essay and profit by his precepts and effect a big reduction in the number of committees and sub-committees.

Time will tell, and it will be interesting to see whether the arrangements adopted by the British Transport Commission and its Executives for the promotion of higher grade staff comply with the principles enunciated by Lord Ashfield. Among the upper ranks of the transport service, the need for ability of a high order is patent. It is not equally evident that a sufficient number of young men is in training to fill gaps that the inexorable march of time will cause soon. Before the war, the railways enlisted a considerable number of men recommended by their University Appointments Boards for all-round capability. These recruits went through a strenuous course of training on equal terms with men selected on merit from the ordinary managing and clerical staff. The majority of the specially trained people rose to responsible positions in the service, because they had the grit and gumption to take definite action when circumstances threw them on their own resources. The development of these schemes for unearthing ability will be essential for the success of the new administrative system, no matter how it may be changed later in the light of experience. Lord Ashfield will have added one more to his many public services if his paper rouses an active interest in these questions.

### British Transport Commission Traffic

A FURTHER substantial increase, this time of £7,356,000, is shown in the latest return of traffic receipts issued by the British Transport Commission. It relates to the four-weeks period to March 21, and brings the aggregate increase for the year to £18,965,000. Railway receipts during the four weeks, compared with the similar period of 1947, rose by £6,809,000 to £24,825,000. Details of the traffic of British Railways, London Transport, and Inland Waterways for the four weeks and of the aggregates for the year, compared with similar periods 12 months earlier, are given below:—

	Four weeks to March 21 1948 £000	1947* £000	Incr. or decr. £000	Aggregate to March 21 1948 £000	1947* £000	Incr. or decr. £000
<b>British Railways (receipts from railway working)—</b>						
Passengers ... ..	7,601	6,533	+ 1,068	22,415	19,998	+ 2,417
Parcels, etc., by passenger train ...	2,161	1,947	+ 214	6,394	5,536	+ 858
Merchandise (other than Classes 1-6) and livestock ... ..	7,338	4,342	+ 2,996	21,277	14,434	+ 6,843
Minerals & merchandise (Classes 1-6) ...	2,288	1,062	+ 1,226	6,652	4,000	+ 2,652
Coal & coke ... ..	5,437	4,132	+ 1,305	16,012	12,035	+ 3,977
	24,825	18,016	+ 6,809	72,750	56,003	+ 16,747
<b>London Transport—</b>						
Railways ... ..	1,113	1,008	+ 105	3,337	2,891	+ 446
Buses & coaches ... ..	2,339	2,051	+ 288	6,882	5,643	+ 1,239
Trolleybuses & trams ...	843	750	+ 93	2,506	2,087	+ 419
	4,295	3,809	+ 486	12,725	10,621	+ 2,104
<b>Inland Waterways—</b>						
Tolls ... ..	56	23	+ 33	163	102	+ 61
Freight charges, etc.†	82	54	+ 28	227	174	+ 53
	138	77	+ 61	390	276	+ 114
<b>Total</b> ... ..	29,258	21,902	+ 7,356	85,865	66,900	+ 18,965

\* The comparison of 1948 with 1947 is affected by increases in fares, rates and charges, introduced during the year 1947.

† Not including freights earned by vessels not owned by the Commission.

For the 12 weeks of the current year, compared with 1947,

railway traffic are £16,747,000 greater at £72,750,000. Of this improvement, merchandise accounts for £6,843,000, coal and coke for £3,977,000, passengers for £2,417,000, and parcels by passenger train for £858,000. During the same period there has been an increase in the revenue of London Transport undertakings of £2,104,000.

### Directors and Technicians

WE have previously referred to the varied and useful purposes which were served by the directors of the four main-line railway companies. The membership of those boards included some of the best and most experienced administrators and business men in the country. Under the Transport Act of last year, the great commercial and stabilising influence which was wielded by the railway directors was improvidently discarded by the Government, without any recognition of the long service and high value which many of these men had contributed to one of the nation's basic industries. The loss of the services of the railway director is one of the weaknesses in the present organisation of nationalised railways.

Sir Robert Burrows, who until the passing of the railways into State ownership was Chairman of the London Midland & Scottish Railway Company, has contributed a valuable and thoughtful article to *The Daily Telegraph*\* on some of the basic defects in the organisation of the nationalised industries. He points out that the Government is obsessed with the theory that only the technicians in an industry matter, and that the directors and administrators, and those with special commercial knowledge, are unnecessary, or at any rate should be subordinate to the technician. He touches on an important point when he says that, because they bring wide experience of general industry and act in a part-time capacity, they are aloof from the inevitable rivalries of the executives. They make appointments, are free from any tinge of self-interest, and direct the policy of their companies in the interests of their shareholders, and therefore with due regard to economy and efficiency.

Moreover, they are concerned not solely, indeed not mainly, with the immediate position, but have an eye to the future and to the strengthening and consolidation of the company's finances so that their concern may meet successfully whatever the future may bring.

Sir Robert Burrows states that industry has learnt from bitter experience that the technical expert, an essential part of the organisation in his own sphere, is the last person to be trusted with the direction of an undertaking, especially if he has power to decide policy and expenditure. This does not mean that a technician cannot be a very good director, but if he is, his success is due to his administrative ability and not to his technical qualifications. Referring to the controlling bodies of the two major nationalised industries—coal and transport—he points out that, although the appointment of trade union leaders and directors of co-operative societies is clearly political, the latter at any rate are likely to apply common-sense trade experience if given the opportunity. Sir Robert Burrows goes on to say that these bodies—presumably the Coal Board and the Railway Executive—are fully executive, and there is no over-riding authority or body with power to keep a vigilant eye on expenditure, to review the work of executives, to encourage developments, and to promote the successful or to dismiss the failures. The absence of this over-riding body means that the executives, in addition to carrying on the day-to-day work, also are responsible for policy and financial control.

So far as concerns the Railway Executive, this is not quite in accord with our understanding of the theory of the transport organisation, although in practice, no doubt, it is accurate enough. There is an over-riding authority to the Executive, established under the Act—the British Transport Commission—and matters of finance and of highest policy would appear to be a function of that body. Whether, however, in view of the considerable measure of autonomy in matters of technical policy and resultant expenditure which is enjoyed by the Railway Executive, the reservation of this power to the Commission is of any great value must remain problematical until greater experience is gained.

Commenting that it is curious that the Cabinet, which is

\* *The Daily Telegraph*, March 25. "Basic Defects in Organisation of the Nationalised Industries," by Sir Robert Burrows.



largely composed of non-technical heads of Ministries and is in effect the board of directors of national affairs, did not see the necessity of appointing a directorial body for each of the nationalised industries. Sir Robert Burrows goes on to discuss the recent controversy in the House of Commons about the responsibility of Ministers to answer for nationalised industries. He suggests that the solution to the problem would be a non-technical board which would supervise the operation of its industry and would be answerable periodically to a committee of the House of Commons. This committee would be something akin to a shareholders' committee; a body from which individuals could seek information and to which they could voice their criticisms. Complaints and queries would be sifted by this committee, and, if it was necessary, it would call for an answer from the appropriate executive body.

Sir Robert Burrows also deals with another important point relating to the organisation of headquarters staff of such bodies as the Railway Executive, and in doing so draws attention to a matter which we have mentioned, and which appears to be coming increasingly to the fore. As these central controlling bodies are composed of departmental technicians who tend to build up at headquarters their own supporting staff, which in turn leads to the unnecessary centralisation of the work of their own particular department, the district or divisional staffs are left with little or no initiative. These central staffs, to keep their principals informed, and indeed to justify their own existence, must call for more and more information from the districts and divisions, but in turn this leads to the appointment of additional staffs in the districts to supply the information, from which follows increased expenditure and consequential growth in overhead expenses. Sir Robert Burrows comments very pertinently that perhaps the very worst feature of this form of organisation is its effect on the responsible officials in the divisions. Deprived of the opportunity to show initiative, and constantly at the beck and call of headquarters, they tend to become depressed and to lose drive.

Sir Robert Burrows' conclusion is that some drastic reorganisation is necessary; he urges the establishment of a central directorial supervisory body composed of some part-time directors, possibly with a certain number of executives. As regards the central executive, the aim should be to keep this body small and the supporting headquarters staff at a minimum. Divisional and district executives in the framework of the general policy of the organisation should be given as much authority as is possible. Each district or division should be given an output, performance, and financial target, and its efficiency should be judged by its results. With a common system of accountancy and a common form of statistical record the central oversight and control by the technical headquarters should be very easy.

With a great deal of what Sir Robert Burrows has to say we find ourselves in agreement. We recall that in the days of private enterprise on the railways it was not always easy to achieve an understanding of the differences between the administrative and executive roles. Now that so much stress is laid on the executive function, and the administrative element so largely has been discarded, a greater realisation of the value of the latter may be achieved, if only because of the human tendency to appreciate some services most after they have been lost.

\* \* \*

### Turn-Round Time of Wagons

MR. P. A. WHITE of British Railways, Southern Region, read a paper on "Turn-Round Time of Wagons" to the Industrial Transport Association at the Royal Society of Arts on March 16. Mr. White used the term in the same sense as Sir George Cuffe, General Manager, Bombay, Baroda & Central India Railway, did in an article contributed to *The Railway Gazette* of November 28—the time it takes for a wagon to go through a complete cycle covering transit from the loading point to destination, unloading and movement to the next point of loading. On this basis the average turn-round time of wagons for any period is the number of serviceable wagon-days divided by the total number of loaded wagons forwarded.

Mr. White stated that, during the wagon drive or campaign begun last November, the turn-round figure was 7.8 days for wagons of all types. He added that the figure was being main-

tained at much the same level this year and contrasted this result with a turn-round time of 9 days in some other period of 1947 which he did not specify.

Now, it so happened that until the end of October, 1947, the total tonnage of originating traffic was nearly 3 per cent. below the corresponding period of 1946. The decrease in the tonnage of high-class merchandise was no less than 12 per cent., and that is the traffic which makes the largest call on wagon stock because it gives an average load at starting point of less than 4 tons as compared with a load of over 10 tons for minerals and coal. There must have been times during the first 10 months of 1947 when the supply of wagons was ample, and in such circumstances, as Sir George Cuffe explained, the calculation of turn-round time may become nugatory. For a comparison of turn-round time between two periods to be valid there must be a brisk demand for wagons during both of them.

It has never been explained how a shortage of wagons arose at the beginning of November when Sir Stafford Cripps alarmed the country by a declaration that the railways had a deficiency of 100,000 wagons. The Chancellor of the Exchequer said something about the 5-day week, but no doubt was thinking chiefly about the Government estimates that 4 million tons more steel, pig iron, limestone and other minerals would have to be carried last winter, as well as 1 million tons more coal.

The Ministry of Transport does not help to clarify matters by advertising that in the last quarter of 1947 the railways moved 1,250,000 tons of freight more than in the same period of 1946, with 40,000 fewer wagons. The advertisements do not say that the whole of the increase was in coal and minerals, while there was a continuous decline in high class merchandise. Neither is any reference made to the reduction in the number of wagons under repair since the latter part of 1947, or to the steady installation of new wagons of high capacity or to the improvement in the locomotive repair position. These factors are of prime importance in keeping traffic fluid and in maintaining an adequate supply of wagons to collieries and other industrial establishments.

Mr. White put his audience wise to the real facts, but is obsessed by the idea that week-end working must go on. He quoted figures of week-end wagon clearances on the Southern Region, rising from an average of 1,786 in November to 3,092 in December, and regretted that in January the figure fell to 2,650. He did not explain why these wagons could not be unloaded in ordinary working hours, but earnestly hoped that traders would continue to receive goods on Saturday afternoons and Sundays, so that more wagons would be available for outward loading and a quicker turn-round of wagons would be achieved.

With the arrival of Spring and the easement in operating conditions which comes with it, there should be no need for railway stations to remain open at week-ends. A permanent arrangement for working extraordinary overtime at stations and traders' premises would be an absurd result of the movement to shorten working hours in industry. Emergencies apart, the Railway Executive should be able to regulate the acceptance and movement of all classes of freight without resorting to exceptional measures for unloading wagons which are sure to become less effective as time goes on.

Though dissenting from Mr. White's views about work on Saturday afternoons and Sundays, we are glad that a railwayman with his practical experience addressed the Industrial Transport Association on wagon user. Misconceptions are rife about wagon supply and wagon shortages. Some of these misunderstandings are due to the dearth of statistics and would be removed if the Railway Executive issued a periodical statement of the number of wagons forwarded under load, with comments on any special trend revealed by the figures.

The monthly *Digest of Statistics* contains weekly averages of the wagon forwardings in four-weekly periods, but these figures come to hand late and are in an inconvenient shape. The utility of prompt and straightforward statistics of wagon loadings is shown by the experience of the United States and Canada where for many years particulars have been published weekly. Across the Atlantic, these returns of wagon loadings act as a trade barometer and assist railwaymen, traders and economists to watch traffic developments. Similar information is evidently ready to hand for the British Railways, and the Executive would make a move, which would be both useful and popular, if it circulated the figures regularly.

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

### Large Metre-Gauge Locomotives

26, Bloomfield Road,  
Pierremont, Darlington. March 24

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I was extremely interested in J. M. Atkinson's letter appearing in the correspondence columns of your March 19 issue. His list of British-built metre-gauge non-articulated engines of much larger capacity than the new Bagnall-built Tanganyika engines would seem to be incomplete without mention of the 2-8-2 engines designed and built in 1927 by Robert Stephenson & Co. Ltd., at Darlington, for the Kenya & Uganda Railways, which at the time were believed to be the largest metre-gauge non-articulated locomotives in existence.

The weight of these Mikado engines alone in working order is 91 tons, and complete with 8-wheel double-bogie tender, 156 tons; tractive force calculated at 85 per cent. of the working pressure is 37,940 lb., with a coupled axleload of 17½ tons.

Yours faithfully,

W. O. SUGDON

### "British Railways"

121, Grange Road, Purley Oaks.  
Surrey. March 19

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—Why sprawl "British Railways" right across tenders and tanks, or why even initial them "B.R."? Why not put a neat crest in the middle, which is easily applied by a transfer.



I append a sketch, which could be elaborated by a proper scroll or garter.

Also, why on earth is it necessary for all locomotives to be painted the same colour? For heaven's sake let us have a little variety in this drab world! It costs no more to paint a locomotive in a different shade, and it would be of historical as well as aesthetic value, to reproduce the liveries of some of the old companies.

Very truly yours,

L. LAWRENCE

### Standard Gauge for Africa

London, S.W.1. March 22

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I have to refer to your correspondent's letter headed "Standard Gauge for Africa," which appeared in your issue of March 5. Your correspondent seems to be rather out of touch with the realities of the situation in Africa.

In the first place, it should be pointed out that the 3-ft. 6-in. gauge was chosen for the majority of the railways in Africa many years ago because of its low cost per mile. It was regarded as being equal to the traffic requirements, even bearing in mind the development which might occur in years to come. It is very easy now to say that all railways should have been built to, say, the standard gauge. One might just as easily say that all railways should have been built to the Russian gauge of 5 ft. Large railway development was possible in Africa because extravagant, or at least expensive, schemes were not started originally, and the lines were built as economically as possible.

The question of speed still does not arise on the majority of the 3-ft. 6-in. lines in Africa, but on the South African Rail-

ways goods trains considerably heavier than in this country are hauled at high average speeds; and speeds of up to 60 m.p.h. are attained easily by passenger trains. Your correspondent mentions the fact that rolling stock available elsewhere could not be used owing to the difference in gauge. I feel sure that many standard-gauge railways would like to know more of this available rolling stock.

The letter stated that the Nigerian line should be converted at once to the wider gauge. Surely your correspondent cannot appreciate the cost, both in money and manpower, particularly at the present time, to carry out such a project. Every ton of steel in the form of railway products is badly needed today all over the world to maintain the existing lines, without embarking on such extravagant ideas. In any case, conversion merely to the gauge of 4 ft. 8½ in. would not meet the case, as presumably a heavier weight of rail would be laid, with the consequent necessity for realigning and strengthening all bridges, and so on, to meet the heavier axleload. As your editorial rightly points out, the question of this gauge for Africa has been well considered, and the 3-ft. 6-in. gauge meets the requirements.

There are many other anomalies of gauge which require correction before such wholesale conversion of the 3-ft. 6-in. to standard gauge is envisaged. One would admit that a big undertaking eventually may have to be considered for the conversion of the metre gauge to 3 ft. 6-in., and, in fact, that has been under consideration already, particularly from the financial point of view. In this case the Kenya & Uganda Railways and Tanganyika Railways, comprising 1,625 miles and 1,355 miles respectively, would be the main part of the project.

It is therefore sensible to suggest that we first consider the smaller and more urgent schemes necessary for that continent, and do not rush into the grandiose schemes which your correspondent suggests.

Yours faithfully,

M. A. CRANE

### Simplification of Railway Services

53, Barrington Court,  
London, N.10. March 27

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—With reference to Mr. Kenneth Brown's letter appearing in your issue of February 20, the linking of lines formerly owned by different companies may be desirable in some cases where it would facilitate useful new through services between important towns or districts, or where it would give relief to chronic or periodical congestion on existing main lines. First consideration, however, should be given to connecting sections of double line with moderate gradients, and the connecting lines should not be too lengthy. Where long stretches of single track are involved, particularly those with difficult gradients, the linking of lines in their existing condition to form a shorter route, or an alternative route of approximate mileage, probably would not be very useful. Perhaps room could be found for the following additional suggestions.

**Gloucester and Stonehouse.**—Let connections be made near Tuffley Junction, and the four lines between that point and Standish Junction be used in common. The lines could be rearranged, the former L.M.S.R. lines to be up relief and up main, and the former G.W.R. lines to be down main and down relief. Near Stonehouse a flying junction could be made, the down line from Swindon being carried over the down and up Bristol lines. The gradients are favourable for this.

There would be far more flexibility in working, and through trains between Cheltenham and London could call at the L.M.R. Gloucester Station instead of reversing at the W.R. Station, and twice fouling both the L.M.R. lines at Tramway Junction, as they now do.

**W.R. trains between the Birmingham District and the West of England** could in existing conditions call at Gloucester (L.M.R.) and run over the L.M.R. lines between Gloucester and Standish Junction, thus giving through services between Gloucester and the West.

**South Wales, Bristol, and Eastern and North-Eastern Regions.**—A useful alternative route between the West of England, South Wales, and Leicester, Nottingham, Sheffield, and the North-Eastern Region might be found by making a connection at or near Rugby between the L.M.R. and E.R. lines. The new route, via Gloucester, Stratford-on-Avon, Leamington, and Marton would be about six miles shorter to Leicester than the L.M.R. route via Birmingham, while to Nottingham the distance would be about the same.

**Lancashire and South Coast.**—The W.R. junction line between Cannock Road and Bushbury could be opened up for regular passenger traffic, and (for example) the express

route between Manchester, etc., and Southampton, Portsmouth, Bournemouth, etc., might be via Stafford, Wolverhampton (Low Level), Oxford, and Basingstoke. No other route could compare with this.

*London, Birmingham, Chester, Birkenhead, and North Wales.*—An alternative route for much of the traffic on the L.M.R. between Euston and Crewe (reputed to be the most congested long-distance main line in the country) could be formed by making a short connection from Wollerton (near Hodnet), on the W.R. Wellington and Nantwich line, to Whitchurch Heath on the L.M.R. Shrewsbury-Crewe line, about 1 mile south of Whitchurch. This link would be about 7 miles in length and over easy country. The new route would be from Marylebone or Paddington via Bicester, Birmingham, Wellington, Hodnet, Whitchurch, and Malpas. The distances are as follow:—

	By existing routes	By new route, via Hodnet (approximate)
Euston to Chester ...	Miles 179½	Miles 181½
Paddington to Chester ...	195½	—
Birmingham (New Street) to Chester ...	73½	—
Birmingham (Snow Hill) to Chester ...	84½	71

On the other hand, trains from the L.M.R. lines south and east of Wolverhampton could use the alternative route between Wolverhampton and Chester, if the old junction between the Stour Valley and Shrewsbury and Birmingham lines, near Victoria Basin (Wolverhampton), were reinstated. Also, trains from south and east of Wolverhampton to Shrewsbury or beyond, now running via Stafford, could run via Shifnal and save 14 miles.

Yours faithfully,  
A. E. BRYANT

## Track Maintenance Statistics

Chelmsford. March 22

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In your issue of March 19 you state that at the end of 1946 there was an accumulated deficiency of 2,530 miles of track renewal on the main-line railways, based on pre-war standards. In view of this leeway on the main lines, which calls for urgent redress, it is a matter of concern that the British Transport Commission is laying down many miles of new running track and sidings between Greenford and Ruislip to carry the small tube trains, with the same heavy standard permanent way as is used to carry locomotives in high-speed service weighing 150 tons.

A modified section of rail would appear to have sufficed for the much lighter weights which the tube trains will impose on it, leaving the supply of heavier rails for the main-line renewals. It would indeed be interesting to be informed of the fundamental basis which decides that a tube train requires the same strength of track as a 150-ton locomotive.

Yours truly,  
JAMES FRASER

[The frequency of London Transport multiple-unit electric services, combined with their high acceleration and rapid braking, results in intensive user of the track. The total weight of a locomotive is not the principal consideration in regard to strength of track; it is the maximum individual axle load which is the important figure. Multiple-unit electric stock is relatively harder on the track, by reason of continuous pounding and so forth, than a train drawn by a locomotive, whether steam, diesel, or electric.—ED., R.G.]

## Railway Staff Magazines

"Fairholme," Lawn Road,  
Guildford. March 31

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Mr. R. Bell is on good ground when (in your issue of March 26) he praises the present-day successor to the former L.N.E.R. Magazine as being an excellent example of a well-conducted staff magazine produced "by the staff for the staff." Also, I thoroughly agree with him that the regional details are most important—in fact, the major portion of a railway staff magazine should consist of regional news.

Nevertheless I feel that he is rather harsh on standardised—or if he prefers it, "syndicated"—articles. Personally I think that most railwaymen will want to acquire a national outlook and will welcome articles or news about the wider territory of British Railways. (Unfortunately not everyone gets the opportunity of seeing *The Railway Gazette*, which covers all railway

news so fully.) For instance, railwaymen all over Britain probably will be interested in the L.M.R. diesel tests, as in due course all lines may be affected by the result; again, national staff organisations such as the Railway Benevolent Institution, the Railwaymen's Orphanage, and the Railway Convalescent Homes, also educational bodies like the Institute of Transport—all of these provide matter from time to time which appeals equally to the man in Aberystwyth as to him in Aberdeen. If a new pattern of platelayer's hut becomes approved for use generally, Battersea, Bristol, Birmingham, and Banff will be equally interested. Southerners will like to hear how their "West Country" engines are behaving in the Highlands, while the doings of the Gresley Pacifics away from their own ground will be followed with interest by London Midland readers. Whether the news comes from headquarters or elsewhere will not matter much to the reader.

One cannot remain static either in railway or publishing matters. Either one goes forward or falls behind, and staff magazines can be a very useful and appreciated link in the evolution of L.M.S.R., L.N.E.R., G.W.R., and Southern readers into British Railwaymen.

Perhaps I should mention that I have been Editor of one of the railway staff magazines for many years, but that this represents only my own opinion, which may or may not coincide with official views.

Yours sincerely,  
B. WEBB

## Big-Engine Policy

"Glengyle Lodge," Bruntsfield Place,  
Edinburgh, 10. April 3

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The remarks on big-engine policy in your issue of April 2 are very interesting. From the point of view of passenger train service, it is fairly obvious that if British Railways hope to attain a state of efficiency anything like that which existed in the pre-1914 era, they will have to resort to smaller locomotives, with lighter and more frequent trains; a condition suitable to this country, except perhaps in war time.

Modern high-pressure engines are costly to build, expensive to maintain, and seldom out of the repair sheds. They haul trains of such a length and weight as to be almost unmanageable, being unable to start by themselves in many instances, needing double stops at stations, and having to halt at the foot of inclines for the purpose of obtaining assistance—all resulting in loss of running time.

An 18-coach train from Edinburgh to London, for instance, crammed to capacity, hinders ticket collectors and other railway servants, and causes much discomfort to the passengers. They have to be fed in shifts, which can be done only after they have made the perilous trek to the dining car, there to be served by a harassed and overworked staff. When the train arrives, at least a thousand people may be thrown on to Kings Cross, which is quite inadequate to deal with them, taxis, station staff, and facilities. Surely two trains of nine coaches each would be a far better proposition, for this reason alone. It might be more expensive, but it would be quicker, if nothing else.

Train speeds have not improved materially since the latter half of the Victorian Age, and the public is beginning to realise it. The "Coronation" was appreciated, a fine example of light high-speed working, which, incidentally, should be performed by locomotives of smaller proportions than those of an "A4" Pacific. On one occasion a North Eastern Atlantic admirably filled the breach when the "Coronation" engine developed trouble. Granted, this was for the latter part of the journey, but engines of the North Eastern dimensions, though not necessarily to their design, could keep up sustained steaming for long runs, if the trains were kept within reasonable limits of weight.

Should a long passenger train be required, contemporary photographs in *The Railway Magazine* show L.N.W.R. 4-4-0s hauling 16-coach trains up the Camden incline, and, for all that has been written about these machines being "thrashed," it is a moot point whether they consumed more coal than a couple of Class "5s" or a "Duchess."

Unless trains are built and run to suit conditions, we shall never be able to go from London to Birmingham in under 2 hr., and the run from Edinburgh to Aberdeen will degenerate more and more.

Yours faithfully,  
ANTHONY MURRAY

[In our leading article on "Big-Engine Policy" last week, on page 396, owing to a printer's error, reference was made to a "loaded train of loose-covered wagons." This should have read: "loose-coupled wagons."—ED., R.G.]





# OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

## SOUTH AFRICA

### Tourist Trains

Two tourist trains from Johannesburg to Bloemfontein and the "Garden Route" have been organised by the S.A.R. & H. administration. These "Round in Fifteen" trains are conducted on similar lines to the "Round in Nine" tours, except that they are on a more elaborate scale. Tourists are taken on excursions to places of scenic and historical interest, and various evening entertainments have been arranged for them. There are also opportunities for participating in various sports.

The itinerary of both trains is the same. Special catering arrangements have been made, and the saloons are of the articulated type, with showerbaths. Hot and cold water is laid on to all compartments in the trains.

### General Manager's Report

In his report for the year ended March 31, 1947, the General Manager states that the gross tonnage carried, and train- and engine-mileage, reached the highest figures ever recorded on the South African Railways. The "valley" periods which were associated regularly with traffic demands some years ago, have disappeared completely. New engines and rolling stock were placed in service at an increasing rate, and the administration's ability to move record tonnages was due largely to the foresight in placing these orders and in arranging for the import or local manufacture of the maximum additional stock possible.

Passengers conveyed rose to a new record, but the increase was due mainly to the larger numbers of suburban passengers, a decline having been recorded in respect of long-distance traffic. Passenger train services generally were improved as opportunity offered. The introduction of the "Orange Express" between Cape Town and Durban as a permanent feature, and the running of a *de luxe* air-conditioned train of the same composition and amenities as the "Blue Train," between Johannesburg and Durban for the winter season, were a step forward in travel comfort in the Union, although the latter service unfortunately did not receive the patronage that was expected.

### Colour Scheme for Main-Line Stock

With a view to giving main-line passenger trains a more attractive appearance, and in order that they may be distinguished readily from other trains, a two-tone colour scheme has been decided on. Suburban stock will remain as at present, and the "Blue Train" will retain its existing distinctive appearance. Other main-line coaches will be painted a deep crimson, relieved by an aluminium roof and a broad cream band the full depth of the windows, plus two lateral cream bands immediately below the windows. The colour scheme will be carried round the ends of vehicles up to the vestibule side door pillars. Main-line coaches ordered from overseas will be delivered in the new colours, and coaches now in service are to be repainted as they pass through the workshops for repair and overhaul.

### Interest on Capital

The capital expenditure on railways, harbours, steamships, airways and aerodromes amounted to £230,417,124 at

March 31, 1947, representing an increase during the year of £13,960,302, and of £143,153,758 since the date of Union. The administration pays interest on all moneys advanced by the Treasury for capital works, and as the loans are not redeemed, interest has to be paid in perpetuity. The total amount of interest-bearing capital at March 31, 1947, was £203,912,594, and the interest on this sum, which is met from revenue, exceeds £7,000,000 a year.

## EGYPT

### Kantara-Rafa Railway

Negotiations have taken place between the Egyptian Government and the British authorities for handing over to the Egyptian State Railways the line between Kantara East and Rafa, which formed part of the Palestine Railways. This section of the Palestine Railways was laid in Egyptian territory, and will be purchased by the Egyptian Government. It is expected that the line will be operated by the Egyptian State Railways as from April 1 this year, and financial liabilities will be settled later.

[It was announced on April 1 that the line had been acquired, and that the cost would be deducted from the Egyptian sterling balances.—ED., R.G.]

### Diesel Shunting Locomotives

Out of the 15 diesel shunting locomotives already ordered by the Egyptian State Railways, six units have been received recently in Cairo. Each unit is capable of hauling a train of 1,000 tons gross weight at 15 km.p.h. They will be used in busy marshalling yards.

### Reinforced Concrete Production

The Egyptian State Railways are now making extensive use of reinforced concrete for the production of various articles to meet railway needs. Among them are footbridges, signal posts, fencing, pipes, cabins, and station nameboards.

## INDIA & PAKISTAN

### Railway Figures in Pakistan Budget

The gross revenues of the Pakistan railways and Posts & Telegraphs from August 15, 1947, to March 31, 1948, are estimated at Rs.20.10 crores; and expenditure at Rs.22.15 crores. The Finance Minister, Mr. Ghulam Mohd, gave these figures to the Dominion Parliament while presenting the first budget of Pakistan which, contrary to the practice in force in undivided India since 1924, when the railway budget was separated from the general budget, included the estimates for the railways. He stated that, during 1947-48, the loss on railways was estimated at Rs.1.5 crores. He forecast a small railway surplus for 1948-49, when the Railways and Posts & Telegraphs Department is expected to earn Rs.36.89 crores, and to spend Rs.37.15 crores.

The deficit budget of the Pakistan railways in 1947-48 is explained by the poor financial condition of the biggest railway system in the Dominion, the N.W.R. This railway, which was the largest in the Indian sub-continent and was the best paying line in the pre-partition days, suddenly became a deficit railway after August 15, and since then has tended to be a drain on Pakistan railways. Prior to partition, the gross earnings of the N.W.R., based on the past three years, averaged Rs.36 crores a year. As a result of partition, the portion of the railway in Pakistan forms five-sevenths

of the former whole. Working in normal conditions, it now should have earnings of over Rs.2 crores a month. As against this, the latter half of August, 1947, earned only Rs.20 lakhs; and the whole of September, Rs.70 lakhs. There was some improvement in November, when the gross earnings rose to Rs.90 lakhs, followed by Rs.1.2 crores in December.

## AFGHANISTAN

### Trunk Communications with Pakistan

Work has begun on a £4½-million development scheme in the shape of hydro-electric, irrigation and trunk road construction works. The two main roads to be constructed are in continuation of existing sections of the North Western Railway of Pakistan, and with them will form trunk lines of communication from the Indian peninsula to (a) Kabul, the Afghan capital; and (b) Kandahar and the Helmund Valley. Road (a) runs from Torkham, near the Khyber Pass, up the Kabul River gorge and valley to the capital, a distance of about 170 miles. The country traversed is rugged and difficult, and in one 40-mile stretch the river falls about 2,500 ft. Road (b) starts from Chaman, the railroad beyond Quetta in Baluchistan, and terminates at Girisahk, where there is to be a dam on the Helmund River. The local subsidiary of an American firm of contractors has the work in hand. [See also p. 422.—ED., R.G.]

## UNITED STATES

### Oscillating Rear Lights for C. & N.W.

Mars automatic electric rear lights have been fitted to 66 Chicago & North Western suburban trains. The lights are switched on automatically when the driver applies the brakes, and throw a beam that oscillates in a figure "8." The Mars light has been applied already to a large number of C. & N.W. main-line trains. In addition, all diesel-electric goods and passenger locomotives and a number of steam locomotives on the system are equipped with a similar headlight which flashes a white figure "8" beam while the train is in motion, and which changes automatically to red in the event of an emergency stop.

## EIRE

### Dublin-Cork Non-Stop by Diesel

The first train, freight or passenger, that has ever run non-stop from Dublin to Cork, a distance of 165½ miles, was operated experimentally on March 21. It was hauled by the new C.I.E. diesel-electric shunting locomotive, and this record run is an augury of the improvements which may be expected under the company's programme of superseding all its steam locomotives by diesel-electrics.

The new engine, No. 1000, built at Inchicore Works, was designed only for shunting and transfer work in the Dublin area. It is a 0-6-0 with a Mirlees "TLTD6" six-cylinder pressure-charged diesel engine, developing 535 b.h.p. at the one-hour rating and 487 b.h.p. at the continuous rating at 710 r.p.m. The power unit is direct-coupled to a 290-kW. generator of Brush manufacture. The load hauled on the experimental run was almost 400 tons, and the journey was completed in 8 hr. 40 min.

Four more shunting locomotives of this type are being built at Inchicore. Two 915-h.p. diesel-electric locomotives are on order, to haul either suburban passenger or general freight trains; as well as six 1,830-h.p. locomotives for main-line express passenger services.

## Modernisation of Toton Up Yard, L.M.R.

*Installation of remotely-operated rail brakes and points on similar lines to those in the down yard modernised by the L.M.S.R. in 1939*

**D**ETAILS of an important scheme for speeding up the movement of coal supplies from the Midlands to London, and to the South, East, and West of England, were reported in our January 30 issue. The scheme provides for the complete modernisation, with the most modern equipment, including remotely-controlled railbrakes, of the up traffic yard at Toton Sidings, between Nottingham and Derby, at the southern end of the Erewash Valley. This yard is the key point in the London Midland Region for the reception of coal from collieries in Derbyshire, Nottinghamshire, and South Yorkshire; and for the marshalling of some 2,700 wagons daily into trains for the South, East, and West of England.

Modernisation of this yard is to be carried out so as to enable at least 500 to 600 additional wagons of coal daily to be shunted and marshalled, representing a "target" improvement of from 5,000 to 6,000 more tons of coal every working day. Plans of the sidings in their present form and as they will be after modernisation are reproduced on the opposite page.

The yard which is being superseded comprises ten arrival lines of insufficient length to accommodate full train loads hauled by modern engines; shunting is by gravity, and the movement of wagons is controlled by hand-brakes. The departure and "reser-

voir" facilities for holding temporary "rushes" of traffic are inadequate, and slow down the working at peak periods. In order to overcome similar difficulties in the movement of coal empties on the down side, the former L.M.S.R. completed in 1939 a large-scale scheme involving the complete modernisation and mechanisation of the Toton Down Yard, and the up side is now being improved similarly. The mechanisation of the down yard was described fully in our issue of August 18, 1939.

The new scheme will provide arrival lines of adequate length, with special signalling equipment to expedite the movement of wagons over the "hump," whence they run down into the sorting sidings. Power-operated railbrakes will be installed to slow down the wagons as they run into the sidings, among which they will be distributed by power-operated points.

### Remote Working from Control Tower

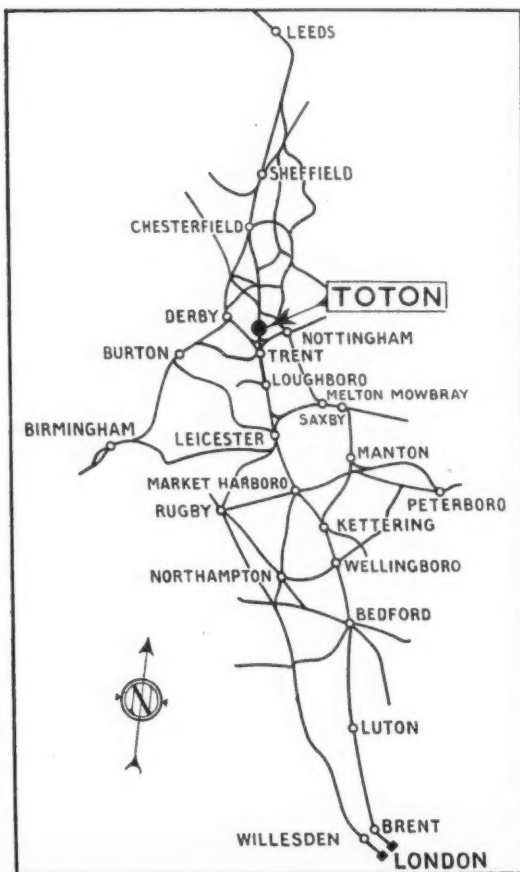
Movement of wagons into the sidings will be regulated remotely by operators in a modern control tower. Staff accommodation will be modernised, and increased storage siding accommodation provided, with improved layout of marshalling and departure facilities.

Other improvements will include instal-

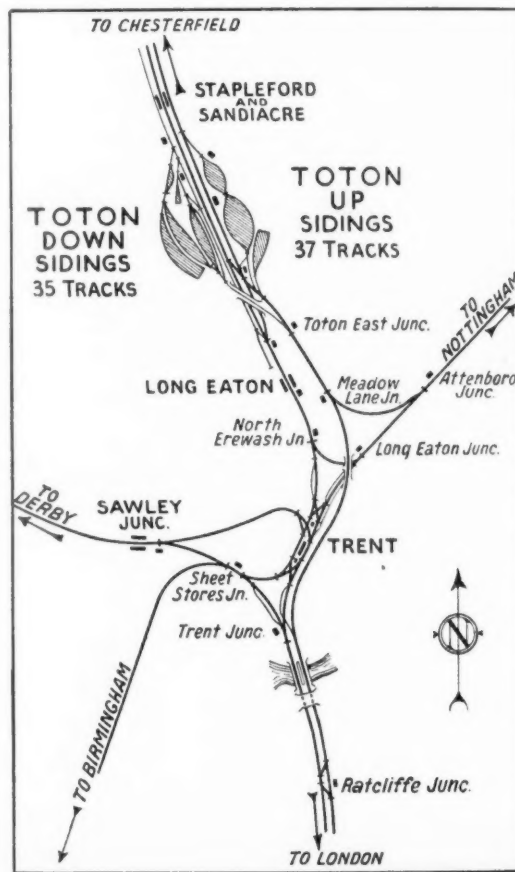
lation of electric light throughout the yard, enabling working to go on almost as speedily by night as by day; and loud-speaker equipment enabling the controllers in the control tower to relay instructions promptly to any point in the network of sidings.

**BRITISH STANDARD FOR METHODS FOR ANALYSIS OF STEEL.**—The British Standards Institution has recently published parts 2, 3, 4 and 5 of B.S. 1121, "Methods for the Analysis of Steel." These parts relate to nickel, tungsten, aluminium and copper, respectively. Copies may be obtained from the British Standards Institution, Sales Department, 24, Victoria Street, London, S.W.1, price 1s., post free, for each part.

**HAIFA-CAIRO EXPRESS—MINED IN PALESTINE.**—Forty passengers were killed and 60 injured when a Haifa-Cairo express train was blown up by three electrically-detonated mines placed on the track between Jaffa and Haifa in Palestine on March 31. Most of the casualties were Arabs, British troops in the rear two coaches of the train escaping unhurt. The engine was blown about 100 yd. along the track and four coaches were derailed. The Stern gang claims responsibility for the outrage, which is the second in five weeks (see our March 5 issue). Service on the line has been reduced from daily to three times weekly in both directions.



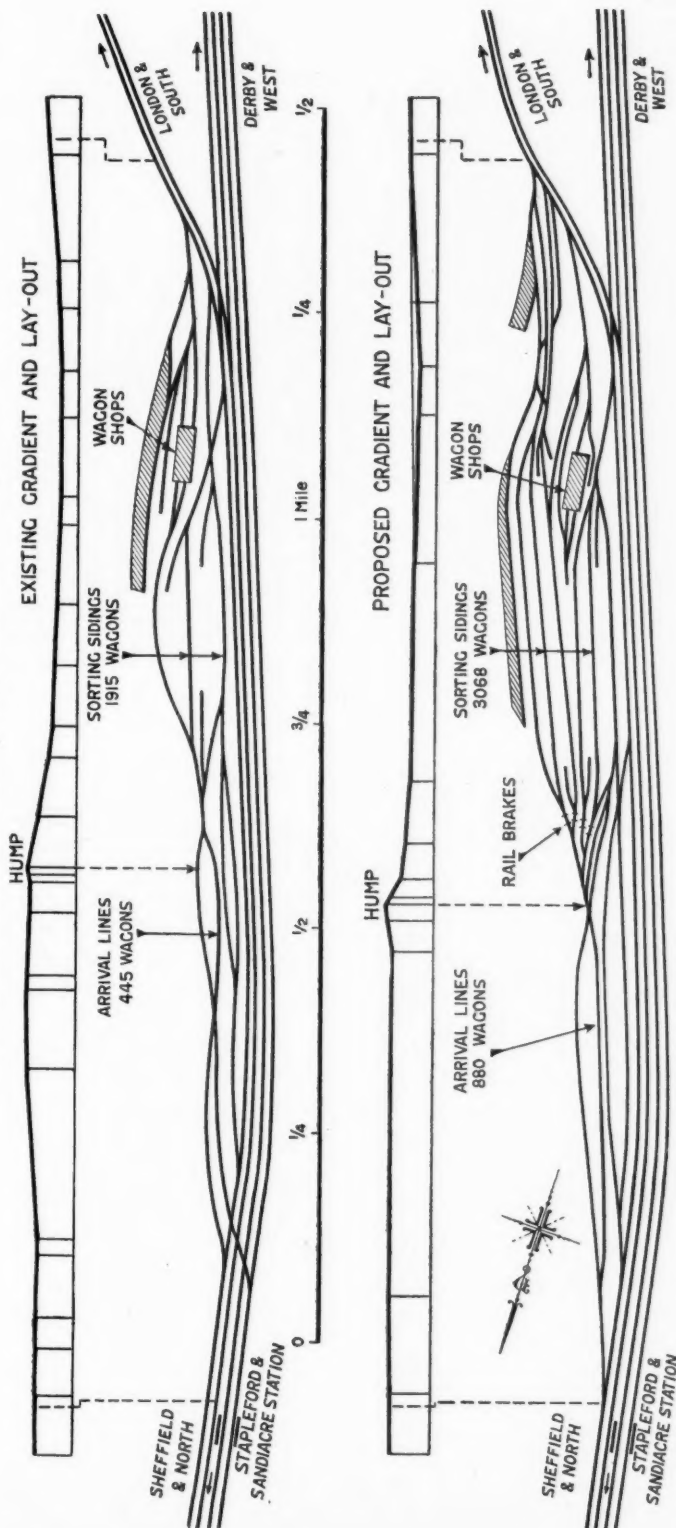
Position of Toton yard in relation to L.M.R. main lines between London, the Midlands, and North



Junctions in the vicinity of Toton, showing access to the yards from the north-south and east-west routes



# Modernisation of Toton Up Yard, L.M.R.



Layout of tracks and gradients in the present yard compared with those of the modernisation scheme

## Transport Unification in East Africa

### Approval in Kenya for amalgamation with Tanganyika system

THE Kenya Legislative Council on March 16 approved the proposals set out in Sessional Paper No. 1 of 1948 for the amalgamation of the K.U.R. & H. and the Tanganyika Railways & Ports Services. The motion calling for the approval came from the Deputy Chief Secretary (Mr. C. H. Thornley) who, whilst admitting that the present financial position of the Tanganyika Railways was certainly less sound than that of the K.U.R. & H., put forward arguments to show that the position would improve considerably as a result of groundnuts and other developments.

He also suggested the possibility that the Tanganyika and Rhodesian railway systems might be linked physically in the near future, and stated that the Member for Transport on the East African High Commission (Sir Reginald Robins) was in consultation with the British and Rhodesian Governments on such a plan.

Mr. Thornley began his speech by pointing out that Council had given its blessing already to amalgamation in principle. An argument against amalgamation in the past had been that the Tanganyika Railways' financial position was far from sound, but big developments in Tanganyika of late were a good and fair *quid pro quo* for the undeniably strong, healthy, and sound position of the K.U.R. & H. He added that H.M. Government was investing a considerable proportion of £24 million in the groundnuts scheme in Tanganyika. A good deal of money would be spent on a new port at Mtwara, and on a railway from that port up country. Whether or not the groundnuts scheme was a complete success, there would be a considerable increase in rail traffic and revenue. The old Singida line, which had never paid its way, had been uprooted and was being used in the construction of a new line to the lead mines at Mpanda.

### Suggested Connection with Rhodesia

There was also a possibility that in the comparatively near future arrangements might be made with the Governments of the two Rhodesias for a physical link between the Rhodesia Railways and the Mtwara line. If such a plan came to fruition, the Rhodesia Railways would be able to traverse an all-British route to an all-British port through a country believed to be capable of extensive development. The only alternative would be the construction of a new line to the West Coast at Walvis Bay (see our February 6 issue), and it would traverse uninteresting and unattractive country and would be very much longer than the construction necessary to link up with the Tanganyika Railways Mtwara line.

### WAGE INCREASE RECOMMENDED IN U.S.A.

—A wage increase of 15½ cents an hour, effective from November 1 last, was recommended on March 27 by a Presidential Emergency Board for United States locomotive drivers, firemen and shunters, according to Reuters. The recommendation, if adopted, would affect nearly 200,000 workers and practically all the major railways. The board's proposal would give the three unions concerned the same benefits as were received by members of the two other operating unions recently.

## Unusual Viaduct Reconstruction Methods

*In rebuilding Twelve-Mile River Viaduct, the Canadian National Railways have used piers with 130-ft. H-piles encased in Prepak concrete; one was built in reverse*

FOR reasons given in an editorial note on page 422, it has been necessary to reconstruct under traffic Twelve-Mile River Viaduct on the double-track Hamilton-Niagara Falls main line of the Canadian National Railways. The original viaduct and the structure as now rebuilt are shown in the diagrams below. It will be seen that the two trestle-tower piers, with their foundations at a level above the new river water level, have been eliminated, and that by moving the 65-ft. and the three 100-ft. spans along the centre line longitudinally on to a new abutment and four new deep-foundation piers, it has been possible to re-use the original superstructure; and, with the addition of a new 58-ft. span, to provide a deep-foundation structure 15 ft. longer than the original viaduct.

The two new central piers are both in the enlarged river channel, and one of them had to be constructed in the swift current of the old and more confined channel. The other had to be sited close alongside one of the old trestle-towers, which had to continue to support the spans without danger to its shallow foundations until the new pier was able to relieve it. In these circumstances, it was decided to construct each of these piers by driving three rows of 12 H-section steel piles down to rock, at an average depth of 70 ft. below water level in the enlarged channel, and to extend them upwards to within 6 ft. of girder bearing level; and to encase them in Prepak concrete.

The part below water level and down to firm material, some 15 ft. below the channel bed, was enclosed in shuttering composed of steel sheet-piling, into which the concrete was poured to form a pier-base 41 ft. 6 in.  $\times$  11 ft., with semi-circular ends. The pier shaft, when completed with welded angle bracings tying the piles at intervals and encased in concrete, was 40 ft. 6 in. long transversely and 9 ft. wide; it also had semi-circular ends.

### Pier Construction Details

In the case of the pier in the old channel, the sheet piling was first driven and the material within it excavated. The piles were then driven to refusal with a steam pile-driver under the bridge, and additional lengths of piles were spliced or welded on up to the cut-off level, and tied. The pile-base was next filled with coarse aggregate, and, in accordance with Prepak practice, was pressure-grouted with a special cement-sand mix. This grout, by its inherent immiscibility, forced the remaining water

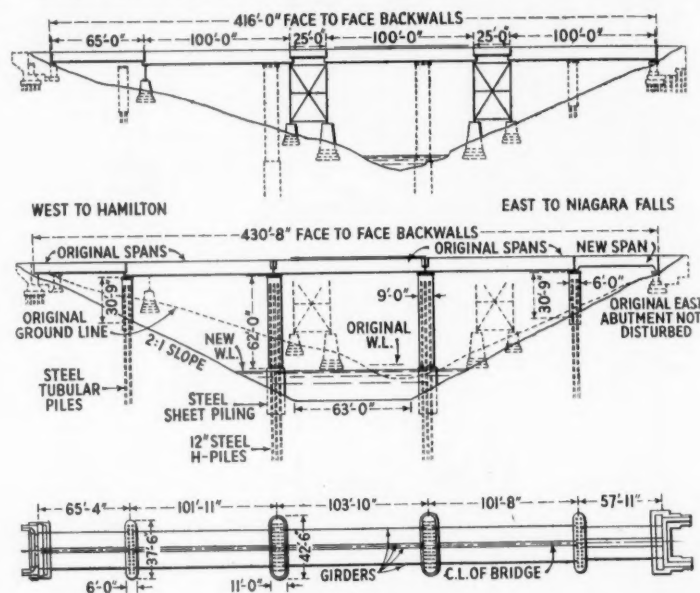
out as it rose in the cofferdam or shuttering. Finally the pier shaft was concreted in a similar manner with a normal form of shuttering, and the heavily-reinforced cap added.

The pier adjacent to the old steel-trestle tower, on the other hand, was constructed in reverse, the shaft and cap being completed before the base. This was necessary owing to the great depth it had to be built below the old ground level and the danger

essentially of two rows each of 13 tubular steel piles—as H-section were difficult to obtain—surrounded with Prepak concrete above ground level and driven roughly to new bed level; the capping and general procedure were similar to those of the big piers, but no sheet-piling was, of course, necessary.

The advantages claimed for the Prepak as compared with ordinary methods of concreting are as follow: greater strength, especially when aged, assuming that the cement content is equal; greater resistance to cracking, freezing, and thawing; greatly reduced shrinkage in drying out; and greater impermeability.

We are indebted to our American contemporary, *Railway Engineering and Maintenance*, for these details and for the illus-



Elevation of previous structure (above) and elevation and plan of the viaduct as rebuilt (below)

of excavation so close to the original tower foundations. The sheet and H piling were again completed first, and then the concreting of the shaft above the then ground level and the cap. This provided a support for the spans, and enabled the trestle-tower to be dismantled before the excavation was begun and the base completed. As finished these two piers are almost identical in all respects, including the 130-ft. piles in each.

The two outer piers are only about 30 ft. high above new ground level, and consist

of excavations. It states, moreover, that this work was completed in a period of eight months at a cost of some \$350,000, whereas a new viaduct would, it is estimated, have taken 2½ years and cost \$1,300,000. Also, that the type of pier and method of construction adapted to the special conditions obtaining were devised by Mr. Charles P. Disney, Consulting Engineer, Toronto; and that Mr. E. R. Logie, Chief Engineer, Central Region, C.N.R., was responsible for the general supervision of the work as carried out.

### B.T.C. OWNERSHIP OF ROAD VEHICLES.

—At the annual general meeting of the Devon & Cornwall Area of the Road Haulage Association, Mr. Roger W. Sewill, the Association's Director, pointed out that even when the Transport Commission had acquired all the 30,000 which it expected to take over, it would still have only one-fifth of the total number of vehicles in the road haulage industry. Of that total of 30,000 vehicles, 10,000 had been railway-operated before the Act came into force, and even if the whole of the remaining 20,000 were owned or controlled by members of the R.H.A., the Commission's entire road fleet would be less than half

of the number of vehicles still remaining in the hands of R.H.A. members operating under free enterprise.

### CANADIAN RAILWAYS RATES INCREASE.

A joint statement issued by Mr. R. C. Vaughan, chairman of the Canadian National Railways, and Mr. W. A. Mather, Chairman & President of the Canadian Pacific Railway, says that the extent of relief granted under the Board of Transport Commissioners' order for a 21 per cent. rates increase cannot be determined without some study. It is clear, however, that but for unprecedented traffic volume the amount of the increase would fall far

short of the minimum requirements. It is equally apparent that either further increases in operating costs or a decline in traffic volume may necessitate an application for further relief. The increase is calculated to give the Canadian Pacific Railway \$30,908,951 more revenue. On the basis of 1947 traffic, this will give the company an even balance-sheet at the end of 1948, and a small surplus on railway transport operations. It is expected to leave the C.N.R. somewhat short of full revenue requirements. The increase was reported in our April 2 issue, and followed lengthy negotiations after the railways had applied for an increase of 30 per cent.

## Unusual Viaduct Reconstruction Methods



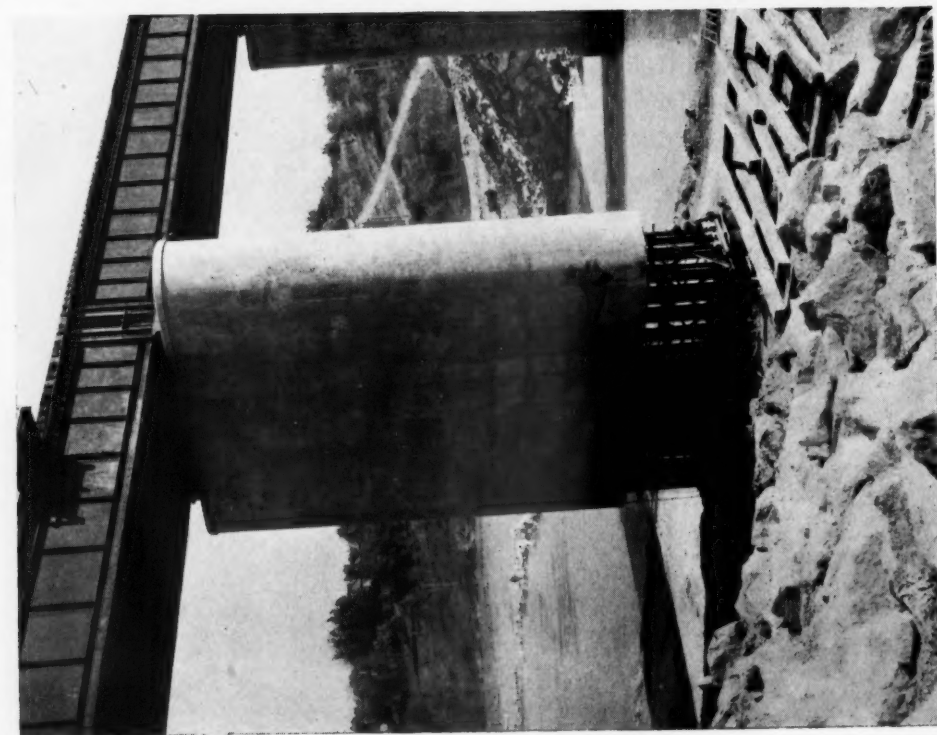
*Derricks at work on the superstructure. Concrete for the lower part of Pier 3 has not been placed at this stage, awaiting removal of the adjacent steel tower and its footings*



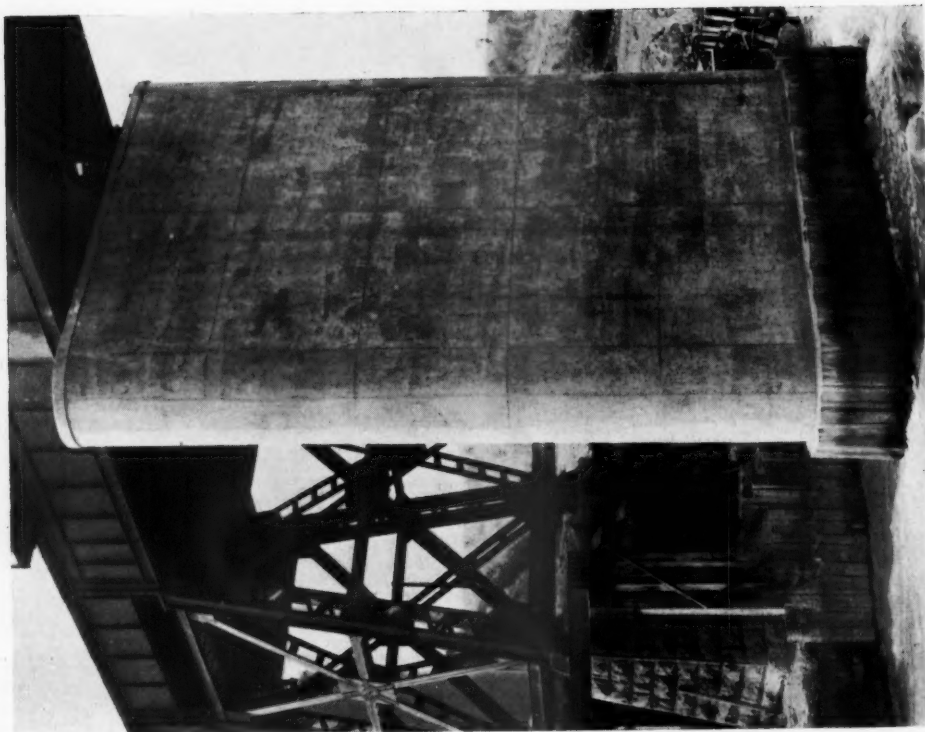
*Pier 2 as it appeared when the H-piles had been carried to the cut-off line*



### Unusual Viaduct Reconstruction Methods



*Pier 3 after the removal of the adjacent trestle-tower and before the concrete for the lower portion of the shaft and footing was placed*



*An impression of the slender nature and uniform section of the new pier No. 2 constructed in the channel*

# New Shunting Locomotives, Burma Railways

Twenty-eight 2-6-4 metre-gauge tank locomotives have been ordered from Robert Stephenson & Hawthorns Limited

THE Burma Railways have placed with Robert Stephenson & Hawthorns Limited an order for twenty-eight metre-gauge 2-6-4 shunting side-tank locomotives, which are being built to the Indian Standard Specification under the inspection of Messrs. Rendel, Palmer & Tritton; these engines are of the "ST" class. They differ in some respects from the non-superheated "E" class locomotives, built in Germany for the Burma Railways system in 1929.

A combined superheater header and multiple-valve regulator is provided in the new locomotives, with a tangential steam dryer in the dome. The steam dryer has a shut-down valve to enable steam to be cut off, and the superheater elements drained of steam immediately after dropping the fire.

Boiler, firebox, cylinders, and steam pipes are lagged with Alfol insulating mattresses. The grate is of the drop type, and the ashpan bottom has sliding doors. Two 2½-in. Ross pop safety valves and two Gresham's No. 7 injectors are fitted.

The cylinders, each of which has a renewable liner in the barrel, are provided with "NC" type bypass valves. Narrow

rings are fitted to the 8-in piston valves, which have adjustable spindles, and are actuated by Walschaerts gear giving a travel of 4½ in. at 88 per cent. cut-off. The reversing gear is operated by a handwheel and screw.

The connecting rod big-ends and the coupling rod brakes are lubricated with hard grease, the horizontal grease chambers being formed integral with the rods, and fitted with Ajax bayonet-pattern grease nipples. All axleboxes except on the leading pony truck are bronze, and a telescopic dust shield covers the body of each axle.

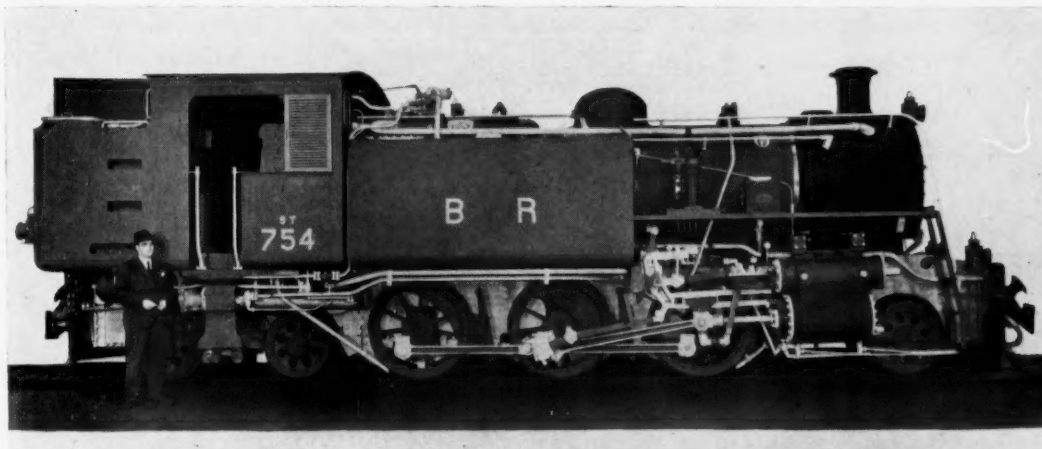
The coupled axles are compensated at each side with a cross-beam in front of the leading axle, which in turn is coupled to the pony compensating beam. The laminated bearing springs are underhung at the driving and trailing wheels, and overhung at the leading wheels. The pony truck is controlled by swing links, and has 3½ in. play each side. The trailing bogie is controlled by helical springs with 3½ in. play on either side.

Special fittings include a two-feed hydrostatic lubricator, an "SJ" vacuum ejector, and Mark IV graduable-application steam brake valve for operating the

steam brake on the locomotive, and the vacuum brake on the train. To prevent water surging back into the bunker tank and overflowing at the filler holes, a non-return valve is fitted in the equalising pipe between each side and rear tank.

Principal dimensions are as follow:—

Gauge	...	...	Metre
Cylinders, dia. x stroke	...	...	15 in. x 22 in.
Driving wheels, dia.	...	...	3 ft. 7 in.
Boiler barrel, dia. (outside)	...	...	4 ft. 4 in.
" " length	...	...	9 ft. 3 in.
Firebox length (outside)	...	...	7 ft.
Heating surface—			
Large tubes	...	...	237 sq. ft.
Small tubes	...	...	417 sq. ft.
Firebox tubes	...	...	100 sq. ft.
Total evaporative	...	...	754 sq. ft.
Superheater	...	...	178 sq. ft.
Combined total	...	...	932 sq. ft.
Grate area	...	...	12.75 sq. ft.
Working pressure	...	...	180 lb. per sq. in.
Tractive effort at 85 per cent. boiler pressure	...	...	17,613 lb.
Weight in working order	...	...	55 tons 14 cwt. 1 qr.
" light	...	...	42 tons 11 cwt. 3 qr.
" on coupled wheels	...	...	28 tons 17 cwt.
Coupled axle load	...	...	10 tons maximum
Ratio of adhesive weight to tractive effort	...	...	3.668
Tank capacity	...	...	1,550 gal.
Bunker capacity	...	...	3 tons
To negotiate a curve of 250 ft. radius	...	...	



One of the 28 new 2-6-4 metre-gauge tank locomotives for the Burma Railways

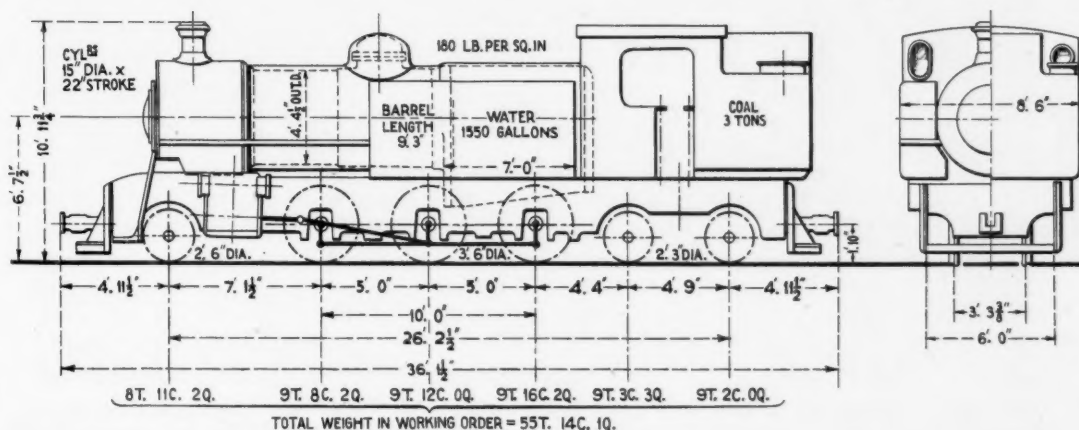
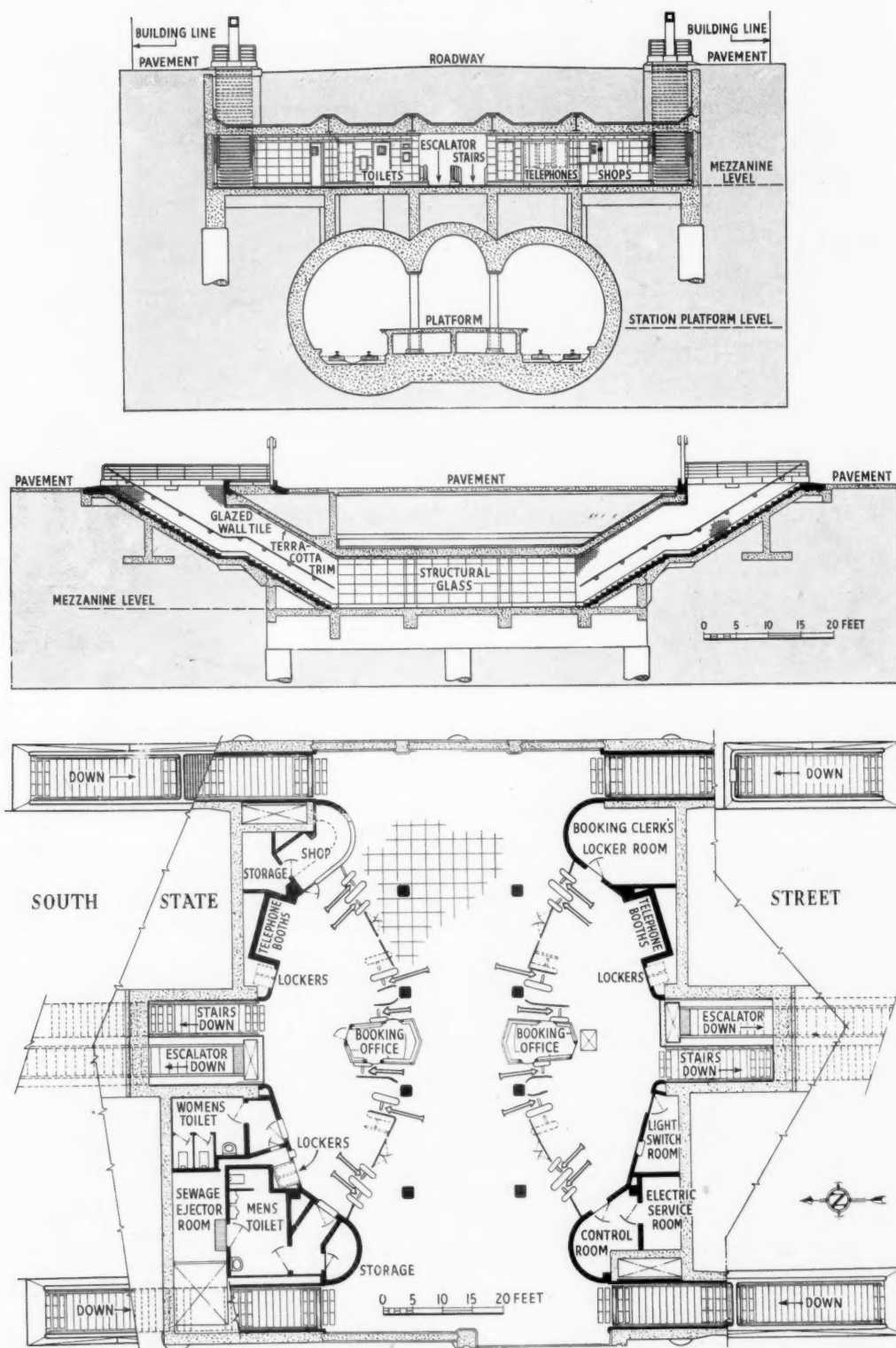


Diagram showing principal weights and dimensions

## Chicago Underground Railway Stations



Sections and mezzanine plan of typical station in the Loop (business) area of Chicago. A mezzanine circulating area and booking office is approached by stair from street level. The island platform has both escalator and stairway access



## Chicago Underground Railway Stations

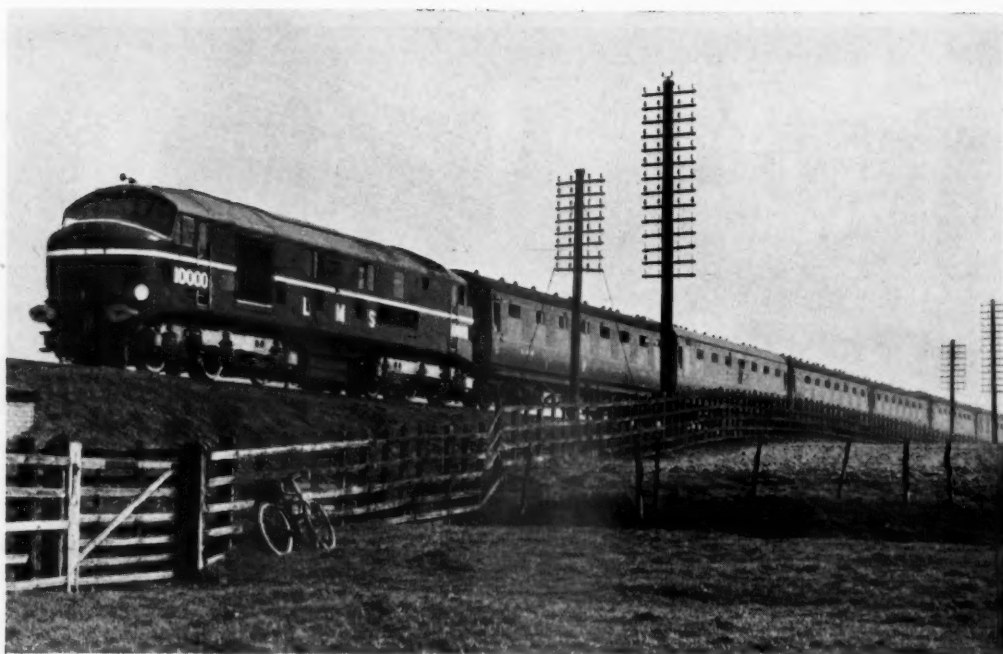


*Adams-Jackson Station, a typical mezzanine station on the Chicago Underground, served by two ticket booths. The fluorescent lighting will be noticed*



*Island platform as used at the downtown (business area) stations of the Chicago Underground*

### L.M.R. Diesel No. 10000 in Passenger Service



*The first British main-line diesel train, drawn by locomotive No. 10000, near Radlet, L.M.R., on the run from St. Pancras to Manchester*

[Photo]

[E. D. Bruton

### General Smuts in S.A.R. Dining Car



*Dining car in service on South African Railways, showing Field-Marshal J. C. Smuts, Prime Minister of South Africa*

## RAILWAY NEWS SECTION

## PERSONAL

Mr. J. S. Pettigrew, Assistant Chief Engineer, has been appointed Chief Engineer of the Sudan Railways, in succession to Mr. F. L. Harwood, retiring.

Mr. D. G. Bourn, Traffic Manager, Iraqi State Railways, retired on March 31, and is returning to England.

Mr. John Cook, A.M.I.Mech.E., M.L.Loco.E., who was last year appointed Chief Mechanical Engineer of the Entre Rios Railways and the Argentine North Eastern Railway, was educated at Aberdeen Grammar School and at Allan Glass

son. Verbal tributes were also paid to the guests by Mr. Miles Beevor, Mr. J. C. L. Train, Mr. V. M. Barrington-Ward, Mr. T. F. Cameron, Mr. C. K. Bird and Mr. E. Coleby.

Mr. T. G. Davies, Traffic Manager of the Western Welsh Omnibus Co. Ltd., has been appointed General Manager of the Rhondda Transport Co. Ltd., as from June 1, 1948, in place of Mr. T. G. Richardson, who is retiring shortly.

Mr. Adin Hull, M.B.E., who, as recorded in our January 23 issue, has been appointed Chief Storekeeper, Buenos Ayres & Pacific Railway, was educated at Rugby,

headquarters at Toronto, is appointed Vice-President of the company there. Mr. A. J. Lomas, formerly General Superintendent at Montreal, is made General Manager of the Central Region with headquarters at Toronto.

Mr. W. E. Robinson, Assistant General Manager, Central Region, Toronto, becomes Vice-President & General Manager, Atlantic Region, Moncton.

Mr. H. P. Hira, who was recently appointed Chief Traffic Manager, Great Indian Peninsula Railway, undertook a course of training on the Great Western Railway at Paddington, and then joined the G.I.P.R. as a traffic probationer in



Mr. John Cook

Appointed Chief Mechanical Engineer, Entre Rios and Argentine North Eastern Railways



Mr. Adin Hull

Appointed Chief Storekeeper, Buenos Ayres & Pacific Railway



Mr. H. P. Hira

Appointed Chief Traffic Manager, Great Indian Peninsula Railway

School, Glasgow: his technical education was received at the Royal Technical College in that city. He commenced an apprenticeship in 1910 with the Caledonian Railway at St. Rollox Works, where he remained until 1914, when he volunteered for service in the Royal Naval Division, transferring later to the submarine service of the Royal Navy. On demobilisation in 1919 Mr. Cook returned to St. Rollox to complete his apprenticeship and continue his technical training. In 1920 he obtained an appointment with the Cordoba Central Railway as Assistant in the Mechanical Engineer's Department. He subsequently held posts as Divisional Locomotive Superintendent at various points on that system, until eventually appointed Outdoor Assistant to the Chief Mechanical Engineer. In April, 1937, he was appointed to the post of Assistant Chief Mechanical Engineer for the Entre Rios and Argentine North Eastern Railways.

Mr. L. C. Glenister, Chief Accountant, Mr. H. W. H. Richards, Chief Electrical Engineer, and Mr. G. B. Barton, Chief Engineer, of the London & North Eastern Railway, who retired recently, were entertained to luncheon in London lately by ex-officers of the L.N.E.R., when presentations were made to them on behalf of their colleagues by the sole surviving officer of that company, Mr. W. H. John-

son and entered the Traffic Department of the London Midland & Scottish Railway, where he remained for three years. He joined the Buenos Ayres & Pacific Railway in 1930 as travelling auditor, and transferred to departmental headquarters on the re-organisation of the accountancy system. In 1937 he was appointed Accountant's Representative in Mendoza. Mr. Hull was transferred to the Stores Department in the next year, and was appointed General Assistant in 1939. He volunteered for active service, and was commissioned in the Royal Engineers, attaining the rank of Lt.-Colonel at G.H.Q., India Command. In recognition of his services in India he was awarded the M.B.E. On returning to Argentina, he rejoined the B.A.P.R., as Assistant Chief Storekeeper. Mr. Hull's father, Lt.-Colonel H. A. Hull, author of a book entitled "Railway Maintenance Problems" (*The Railway Gazette*, 1936), retired in 1933 from the position of District Engineer, Northampton, L.M.S.R.

## CANADIAN NATIONAL RAILWAYS

Mr. W. R. Devenish, Vice-President, Western Region, with headquarters at Winnipeg, is retiring, and will be succeeded by Mr. J. P. Johnson, formerly Vice-President & General Manager, Atlantic Region, Moncton.

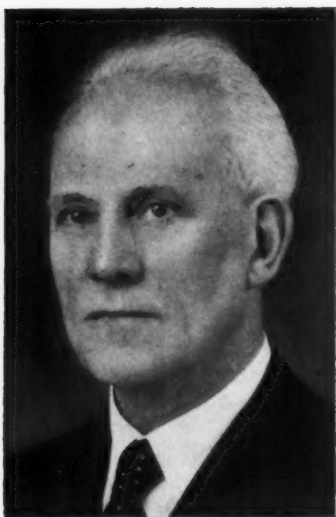
Mr. J. F. Pringle, Vice-President & General Manager, Central Region, with

headquarters at Toronto, is appointed Vice-President of the company there. Mr. A. J. Lomas, formerly General Superintendent at Montreal, is made General Manager of the Central Region with headquarters at Toronto.

Air-Commodore H. G. Brackley has been appointed Chief Executive of British South American Airways.

Mr. A. W. Norman, who has been appointed Chief Officer (Stores) to the Railway Executive, has hitherto been Chief Stores Superintendent, London Midland & Scottish Railway. He commenced his career with the London & North Western Railway in the Goods Agent's Office, Broad Street, and, after four years in various sections, was transferred to the London District Goods Manager's staff. He took an active part in the London District Railway Debating Society, and was a student at the London School of Economics, gaining a "first" in both Rail-





**Mr. A. W. Norman**

Appointed Chief Officer (Stores),  
Railway Executive



**Mr. L. W. Conibear**

Appointed Executive Officer (Passenger),  
Railway Executive



**Mr. D. F. Gowen**

Appointed Salaried Staff Assistant to Chief Officer  
(Staff & Establishment), Railway Executive

way Operating and Railway Law. In 1910 he was transferred to the then newly-formed Buying Section of the General Manager's Office, and organised (under the supervision of the late Mr. S. H. Hunt) the purchasing arrangements for the company's hotels and refreshment rooms. Mr. Norman was appointed Head of the Section dealing with iron and steel, non-ferrous metals, and other materials, in 1915, and in 1919 became Assistant in the Buying Section of the General Manager's Office. In 1922 he was transferred to the office of the Divisional Stores Superintendent, during which time he conducted a special investigation (on behalf of the General Manager) into the realisation of excess and obsolete stores. In 1928 he spent some months in America and Canada in connection with a special inquiry on behalf of the President of the L.M.S.R. In 1929 he was appointed Assistant to the Chief Stores Superintendent, and, in 1933, Assistant Chief Stores Superin-

tendent. Mr. Norman became Chief Stores Superintendent in 1946, and at the same time was appointed Chairman of the R.E.C. Stores Committee. He is a Freeman of the City of London; his grandfather was admitted a Freeman just over 100 years ago.

Mr. L. W. Conibear, who, as recorded in our March 19 issue, has been appointed Executive Officer (Passenger) on the Railway Executive, entered the service of the Great Western Railway in 1905, when he was attached to the Telegraph Department, Bristol. He was transferred in the next year to the Traffic Department at Stapleton Road Station. In 1907 he went to the Divisional Superintendent's Office, Bristol, and was engaged there on various duties until he joined the Army in January, 1917; he served with the Royal Engineers (Light Railway) in France and Belgium. Mr. Conibear returned to the Divisional Superintendent's Office at Bristol towards the

end of 1919, and gained experience in the Passenger Train Section. In 1936 he was transferred to Paddington to the Office of the Superintendent of the Line in the Excursion Department, and was promoted in charge of that section in 1938. In 1941 Mr. Conibear was appointed Assistant Divisional Superintendent at Bristol; and he returned to Paddington as Acting Chief Clerk to the Superintendent of the Line in February, 1945. In May of the same year he became Commercial Assistant to the Superintendent of the Line. He has been associated with the R.C.H. Coaching Superintendents' Conference, and Continental Traffic Managers' and R.E.C. Passenger Committees.

Mr. D. F. Gowen, who, as recorded in our March 19 issue, has been appointed Salaried Staff Assistant to Chief Officer (Staff & Establishment), Railway Executive, was educated at Ascham College, Clacton-on-Sea, and at Framlingham



**Mr. E. A. W. Dickson**

Appointed Assistant to Chief Financial Officer  
(Treasury Matters), Railway Executive



**Mr. J. T. Drinkwater**

Appointed Assistant to Chief Financial Officer  
(Revenue Matters), Railway Executive



**Mr. J. R. Edwards**

Appointed Assistant, Engineering (Communications),  
at Railway Executive headquarters

College, Suffolk, and joined the Great Eastern Railway as a junior clerk at Framlingham in 1916. Apart from a period of service with the R.A.F. in the 1914-18 war, his early railway career was spent at various stations in the Ipswich district. In 1924 he was transferred to the Staff Section, Chief General Manager's Office, L.N.E.R., where he remained until 1932, when appointed Chief Staff Clerk, District Goods Manager's Office, Hull. A year later he was transferred to a similar post in the District Superintendent's Office, Hull, and in 1936 was appointed Head of the Salaried Staff Section, Superintendent's Office, York; shortly afterwards he was transferred to the position of Head of the Wages Staff Section in the same office. In 1938 he was lent to the Chief General Manager's Office, London, for special duty for six months. In 1941 he was appointed Chief Wages Staff Clerk in the Superintendent's, Goods Manager's, Passenger Manager's, and Locomotive Running Superintendent's Joint Staff Section at York. Mr. Gowen returned to the Chief General Manager's Office in May, 1942, as Assistant on the Wages Staff Section, which post he vacated for his present appointment.

Mr. E. A. W. Dickson, M.Inst.T., who, as recorded in our March 19 issue, has been appointed Assistant to Chief Financial Officer (Treasury Matters), Railway Executive, was educated at Haileybury College, and at Gonville & Caius College, Cambridge. He entered L.N.E.R. service as a traffic apprentice in 1926, and, after receiving training in operating, commercial, and locomotive running departments, he entered the Chief General Manager's Office in the Rates & Statistics Section in 1929. He was attached to the District Superintendent's Offices at Newcastle and Sunderland in 1932; and a year later he returned to headquarters to take charge of the Shipping Section, Chief General Manager's Office. From 1934 to 1939 he was Assistant District Goods Manager, Newcastle-on-Tyne, and in 1938 he was appointed a member of the All-Line Committee of Inquiry into District Office Organisation. In 1939 he became Rates & Statistics Assistant to the Chief General Manager. Mr. Dickson's services were lent to the Railway Executive Committee in 1941 for special duties; he returned to headquarters later in the year, and in 1942 he was appointed to the position of Secretary to the L.N.E.R. Committee on Post-War Development, which at the time had been newly constituted. In 1943 Mr. Dickson became Assistant Secretary to the London & North Eastern Railway Company, and was elected a Member of the Institute of Transport.

Mr. J. T. Drinkwater, A.L.A.A., who, as recorded in our March 19 issue, has been appointed Assistant to Chief Financial Officer (Revenue Matters), Railway Executive, joined the Great Central Railway in the Audit Office, Manchester, in 1902, and in 1910 was appointed Personal Clerk to the company's Audit Accountant. From 1916 to 1919 he served with the Royal Artillery in France, Belgium, and Germany, afterwards resuming with the G.C.R. In 1924 he was appointed to the L.N.E.R. Chief Accountant's Office, and in 1928 became Chief Clerk, General Section, and Personal Assistant to Chief Accountant. In 1936 he was made Revenue Assistant, to Chief Accountant, and in 1943 was placed in charge of the London Goods Accounts Office with the title of City Manager's Accountant, retaining the position of Revenue Assistant to Chief

Accountant. In July, 1947 he was appointed Revenue Accountant (Coaching). From 1925 to 1947 Mr. Drinkwater represented the Chief Accountant of the L.N.E.R. at R.C.H. and inter-company meetings, and from 1935 to 1947 he was British railways delegate at meetings in various Continental countries of the Accounts & Exchange Committee, International Union of Railways, and at meetings of the Permanent Committee of the Brussels Central Clearing House. From 1939 to 1947 he was a member of the Accountants' Revenue Sub-Committee, acting as Chairman from 1945 until taking up his present position.

Mr. J. R. Edwards, M.I.R.S.E., who, as recorded in our March 19 issue, has been appointed Assistant, Engineering (Communications), at Railway Executive headquarters, joined the Midland Railway in 1916 as an apprentice in the telegraph laboratory. When the new Signal & Telegraph Department of the L.M.S.R. was formed in 1929 he was appointed to the Communications Section, and ultimately became responsible for that branch to the Signal & Telegraph Engineer. He dealt with the complete re-organisation of the traffic control telephone system and with telephone and telegraph networks, including the introduction of carrier trunk circuits, Creed teleprinters, automatic exchanges and public address systems.

Mr. Alistair Fraser, Vice-President of Traffic, Canadian National Railways, has been elected to the executive committee of the National Freight Traffic Association, New York. He is the first Canadian railway officer appointed to the executive committee by the Association.

The late Mr. Benjamin Talbot, a prominent figure in the iron and steel industry, who was Chairman & Managing Director of the Cargo Fleet Iron Co. Ltd. and the South Durham Steel & Iron Co. Ltd., left £201,784.

The Midland Bank Limited announces that, after nearly 50 years' service, Sir Clarence Sadd, Vice-Chairman, has retired from the active clerical staff, and accordingly relinquishes his positions as Chief of the Executive and Chairman of the Executive Committee. He remains Vice-Chairman.

Mr. W. C. Bolton, London District Road Motor Engineer, Western Region, British Railways, retired on April 5. He joined the Great Western Railway in 1904, when the company had four motor vehicles; today the Western Region has over 8,000.

Mr. Andrew Banks, who has served as Secretary of the North British Locomotive Co. Ltd. for almost 30 years, has retired from that position and from the board. He has been succeeded as Secretary by Mr. James Hamilton.

Among those recently elected Members of the Institute of Transport are Sir Gilmour Jenkins, Permanent Secretary, Ministry of Transport; Sir Reginald Hill, Chairman, Docks & Inland Waterways Executive; General Sir William Slim, Member, Railway Executive; Mr. F. D. M. Harding, General Manager, Pullman Car Co. Ltd.; Mr. W. B. Shelton, Divisional Operating Manager, Crewe, London Midland Region, British Railways; Mr. Charles E. Lee, Associate Editor, *The Railway Gazette*.

Mr. G. L. Darbyshire has resigned from the board of Ribble Motor Services Limited, of which Mr. T. W. Royle and Mr. C. H. Sutherland have been appointed Directors.

Mr. K. W. C. Grand and Mr. J. C. Chambers have been elected Directors of the Devon General Omnibus & Touring Co. Ltd., in place of Sir James Milne and Mr. John Elliot, who have resigned.

We regret to record the death of Mr. Tom Jefferson, Locomotive Superintendent of the Central Railway of Peru.

We regret to record the death on March 31, at the age of 44, after an operation, of Viscount Hambleden, Governing Director of W. H. Smith & Son Ltd.

It is notified in the Supplement to *The London Gazette*, dated April 2, under the heading of Regular Army, that Colonel G. N. Russell, C.B., C.B.E., late R.E., retires on retired pay, April 3, 1948, and is granted the honorary rank of Major-General. General Russell was recently appointed Chairman of the Road Transport Executive.

The late Earl Baldwin of Bewdley, the former Prime Minister, who was from 1908-17 a Director of the Great Western Railway Company, of which his father had been Chairman, left £280,971.

Mr. John Elliot, Chief Regional Officer, Southern Region, presided at a dinner at Charing Cross Hotel, London, W.C.2, on Thursday, April 1, at which representatives of all the departments concerned in the work of relaying the track in Polhill Tunnel were entertained. Some 63 persons were present, including:—

Messrs. V. A. M. Robertson, Chief Civil Engineer; F. E. Campion, Assistant Civil Engineer; L. G. B. Rock, Permanent Way Assistant; A. H. Cantrell, London East Divisional Engineer; J. D. West, Assistant London East Divisional Engineer; H. Judge, Permanent Way Inspector; T. E. Chimes, Superintendent of Motive Power; D. Sheppy, Eastern Divisional Motive Power Superintendent; S. Berwick, Motive Power Inspector; F. Mundy, Outdoor Machinery Assistant; S. W. Smart, Superintendent of Operation; P. Nunn, London East Divisional Superintendent.

Details and illustrations of the work at Polhill Tunnel were given in our last week's issue. See editorial note on p. 422.

#### LONDON MIDLAND REGION APPOINTMENTS

The following staff changes are announced by the London Midland Region, British Railways:—

Mr. A. Jessop, Assistant (Commercial Development), Chief Commercial Manager's Office, to be Assistant to the Chief Commercial Manager.

Mr. J. Wildman, Chief Clerk, Personal & General Section, Chief Commercial Manager's Office, to be Personal Assistant to the Chief Commercial Manager.

Mr. J. W. Tonge, Assistant District Passenger Manager, Euston, to be Assistant to the Chief Commercial Manager (Trade Advertising).

Mr. W. Ewing, Head of Section (Passenger Revenue), Chief Commercial Manager's Office, to be Assistant (Passenger Rates & Fares), Chief Commercial Manager's Office.

Mr. J. Cunningham, District Engineer, Abergavenny, to be District Engineer, Bangor.

Mr. H. L. Douglas, Assistant to District Engineer, Glasgow, Scottish Region, to be District Engineer, Abergavenny.

## Southern Region Catering Services\*

*Wide range of catering facilities reviewed by Mr. E. W. Belcher, M.B.E.*

The capital value of the hotels in the Southern Region is approximately a million and a half pounds, and at the present time, taking them altogether, they are employing some 900 staff. The average turnover for a normal year is somewhere around three-quarters of a million pounds.

The large hotel industry in this country dates back to about 1850, when some of the larger establishments were constructed. The organisation involved in running these larger hotels has developed since that day, and is now more or less standardised throughout the country, in fact, throughout the world. The standard organisation divides the work into sections, and, generally speaking, the main departments are the kitchen, the restaurant, floors, reception & office, bars & cellars, and control. In really large hotels, there is a section given over solely to the maintenance of the structure or the interior.

Many refreshment rooms require modernising and re-designing. This, firstly, is because it has been impossible to undertake work of this type since 1939, and secondly, because the present trade of almost every refreshment room is greatly in excess of what was anticipated at the time of its construction.

Apart from the important termini, where the trade is generally steady, trade in the refreshment rooms spread over the line is spasmodic. There are short periods of fast business when everyone wants to be served at once, and periods of slackness, according to the frequency of train arrivals and departures. This variation of trade is extravagant in staff, as, obviously, the busiest periods have to be adequately covered.

During 1947, in the refreshment rooms of the Southern Region, 17½ million cups of tea and coffee were served; bread was consumed at the rate of 250 tons; the supply of meat pies amounted to 1½ million, and the customers drank 650,000 gallons of draught beer and nearly 5 million bottles of light and brown ale.

The dining car services are perhaps the most specialised of the general catering services. A dining car conductor, attendant, or cook must, first of all, have a distinct leaning towards railway work. If he is not interested in railway operation, he will never be a satisfactory dining car employee. These staff are expert in a manner peculiar to themselves. The cooks in their confined kitchens have a special aptitude for turning out their work. The serving staff or stewards are extremely dexterous.

During 1946, train refreshment services ran approximately 2 million miles, served almost a million full meals, and the staff employed approximated to 250.

A definite step forward has been taken as far as the layout and equipment of refreshment cars are concerned. The new kitchen cars working in the Bournemouth services are the most modern and best equipped vehicles in operation in the British Isles today. New refreshment car stock for the West of England services, now in production, should create international comment. All these new cars are designed in advance of the present-day restrictions on food and the limitations on

the number of courses permitted. It is hoped eventually to extend the service of refreshments of a suitable type, to the complete train, by a mobile service to the compartments.

Concerning steamers, it is not uncommon, particularly on the Channel Islands crossing in fine weather, and, of course, during the day, for the meals service in the saloons to be continuous throughout the journey—as fast as one seat is vacated, it is filled by a waiting passenger. It is also by no means unusual during the bad weather, for the dining saloon to be practically empty, and this variation in trade is a catering problem which, if undue waste is to be avoided, must be overcome by careful storing and part preparation of the various foodstuffs.

There has been a marked improvement in the layout of the ships' galleys in the vessels which have been completed since the end of the war. They are now mostly equipped with electrical machinery and cooking ranges, which assist the cooks in their duties and, at the same time, keep the galleys in a much cleaner condition. The service of food from the galleys to the dining saloons also has been carefully studied, and so has the position of the dining saloon itself within the vessels.

What is most interesting about the staff canteens is that they are run completely by the workers themselves. This is amazing when one considers that these men, without any knowledge of catering whatever, have succeeded in establishing for themselves, on firm lines, their own feeding organisations. Some of the canteens are open day and night, and many of them provide food for breakdown gangs working along the line, in places where refreshment is not available.

## Irish Transport Company

The fourth annual general meeting of Coras Iompair Éireann (Irish Transport Company) was held in the Gresham Hotel, Dublin, on March 24, Mr. A. P. Reynolds, Chairman of the company, presiding.

The Chairman, in moving the adoption of the report and accounts, said it had been a bad year. In the early months there was the coal crisis, and consequent dislocation of rail services. During the crisis they were not allowed to run passenger trains, and could operate only a skeleton freight service, but they still had to expend over £14,000 every week on the permanent way. They also had to pay the operational and traffic staffs, for whom there was no work, because of the guaranteed week. Eventually, the trade unions accepted the position that they could not go on paying wages for which they were getting no return, and they agreed to depart from the guaranteed week, which gave some belated relief. During three months, however, revenue fell short of expenditure by, on an average, £45,000 a week, which was about twice the average weekly losses on the railway for the full year under review.

Another heavy source of expense because of the coal crisis was the compulsory change-over to the use of oil instead of solid fuel for firing locomotives. Now there was an oil crisis, and they were working frantically to convert oil-burners back so that they could burn solid fuel again; and, as they had no control over fuel supplies, they were helpless to prevent losses arising from the rapid change from the use of one type of fuel to the other.

In the autumn, in spite of the recommendations and pleadings of the Labour Court, they had a strike of bus workers, and responsibility for this strike must be laid at the door of the Executive of the Irish Transport & General Workers' Union. The Labour Court—an independent tribunal—heard and decided the case for increased wages submitted to them by the bus men, who rejected the award. Unlike the executives of the railwaymen's unions, however, the Executive of the Irish Transport & General Workers' Union sanctioned the strike demanded by a section of its members. It cost the company £500,000 in gross revenue, and a possible £250,000 in net revenue, because the only savings to be set against the loss of gross revenue were the wages of drivers, conductors, and mechanics.

The wages paid to transport workers

had increased steadily in recent years, and for 1947 the wages paid exceeded those paid in the previous year by £667,690. During the year 1948 it was estimated that the increase over 1947 would be approximately £825,000. The total wages for 1948 would be £3,237,548 higher than those paid for the full year 1939. This represented wage increases of about 70 per cent. because, while in 1939 there were 17,000, there were now 21,000 employees.

The cost of materials also had increased substantially—coal by more than 300 per cent.—but revenue had not kept pace with increasing expenditure, as rates and fares had not been advanced to the same extent. Since 1939, railway rates and fares had been increased by about 50 per cent., road freight rates by about 65 per cent., and omnibus fares, viewing the total revenue from city and country services, had not been increased at all. An all-round increase of 12½ per cent. in rates and fares would close the gap between expenditure and revenue, and on last year's gross revenue would produce an additional £1,103,190. They could not go on losing money, and had asked for permission to increase rates and fares. No such permission had been granted yet, but the delay was not unreasonable because the Minister for Industry & Commerce stated recently in the Dail that the whole transport system was to be brought under review by the Government.

He drew the attention of the meeting to a speech by the Chairman of the Grand Canal Company, who had said that private road merchandise vehicles were operating under conditions which eventually must make it impossible for public transport to be mentioned; there might be a place for private merchandise lorries on the roads of the country, but he was convinced that if the numbers continued to increase and to operate under present conditions, there would cease to be a place for public transport.

Mr. Reynolds added that in 1938 there were 10,400 lorries on the roads, while this year there were 18,750.

During the year they put the first diesel-electric shunter into service, and were entirely satisfied with the experiment to date. Indeed, although it was designed only for shunting and short hauls, they sent this locomotive non-stop to Cork with a 350-ton load. The journey was accomplished in 8 hr. 35 min., including turn-

\* Abstract of a paper "Catering in the Southern Region," read before the British Railways (Southern Region) Lecture & Debating Society on March 18, by Mr. E. W. Belcher, M.B.E., Hotels & Catering Superintendent, Southern Region.



round time, compared with 11 hr. 50 min. needed to do the journey with a steam locomotive. The fuel cost for the test, taking present-day prices, was one quarter that of the fuel cost for a steam locomotive. This must be regarded as satisfactory, particularly as the type of diesel-electric locomotive used was not suitable for the work. When those locomotives which had been designed specially were put into service, a new lease of life would be given to the business of transporting goods by rail. The second shunter was ready for test, and it was hoped that all five would be in service before the end of the year. The first of the new locomotives for the regular services will not be available until late in 1949.

Since the last meeting of stockholders, the supply of new wagons and the over-

haul of steam locomotives had improved the turn-round position on the railway. They had put 30 new double-deck buses into service. Most of these were larger than their predecessors, and carried more passengers. They now had 140 new 8-ton lorries on the road and another 60 of these large chassis were waiting delivery of body parts. They had on order 200 smaller capacity road freight chassis, for which they were building bodies, and these normally would be coming into service at the rate of 10 a week.

Recently they had been offered by Leyland Motors Limited, with whom they had an agreement, 50 complete buses and the parts for a further 50 double-deck bodies. They gladly accepted this offer, and delivery of the complete vehicles would begin at the end of March and con-

tinue at the rate of four a week. When this delivery was completed, the body parts for assembly would flow also at the rate of four per week. This will enable them to turn their own workshops over to the production of single-deck bus bodies and lorries, and thus they would have been able to improve the services in the country and in the cities at the same time. However, they now had been informed that the fuel oil position was critical. This meant that, although they would have the number of new buses necessary permanently to remedy the present unsatisfactory position in this regard, the extent to which they could put the new vehicles into service depended entirely on the supply of oil available to them.

The report and accounts were adopted by the meeting.

## Reconstruction of French Railway Bridges

*Achievements of French railwaymen in bridge reconstruction told by two S.N.C.F. officers*

The Railway Students' Association had the opportunity recently to hear an account of bridge reconstruction on the French National Railways given by two of the executives most immediately concerned, Monsieur R. Dugas, Executive Assistant (Technical) to the General Manager, and Monsieur L. Carpentier, Bridge Engineer, Chief Engineer's Department.

It was stated that, in 1940, 448 railway bridges had been destroyed, of which 425 had been rebuilt in their permanent form by 1943. In September, 1944, however, air attacks and wrecking by retreating German troops had brought the French railways to a condition in which they were, for practical purposes, unworkable.

Temporary bridges were put up quickly in all parts of the country, and the Allied armies constructed a number of bridges, but these were often comparatively unimportant structures and on routes which, although strategically important, were not important parts of the French railway system.

Even before the liberation, however, the French Railways Central Bridge Department had prepared standard designs for temporary timber piling, for short and medium span bridges in steel, masonry, and reinforced concrete, and for standard arches. These designs were circulated to all parts of the system to ensure rapid reconstruction when conditions made it possible.

To marshal the limited resources available, the Reconstruction Division, which had carried through, in less than two years, the rebuilding of bridges destroyed in 1940, was reconstituted and placed under the immediate control of Monsieur Luduc, who was responsible to Monsieur Robert Lévi, Chief Civil Engineer.

Work was put in hand at every location for which it was possible to find contractors able to undertake the work, and for which materials were available, without regard to the normal procedure in awarding contracts. In the early stages, the temporary bridges were built with the help of, (a) materials from stocks abandoned by the Germans; (b) stocks which had been hidden by various steel and engineering works; (c) beams recovered from the wreckage of destroyed bridges; and (d) materials which had originally been intended for other purposes, such as girders for aerodrome hangars. After testing, use was made also of certain old temporary bridges still in

stock at some of the S.N.C.F.'s engineer's depots.

With these materials, together with deliveries of steel trestles from the British railways and roll steel sections supplied through the British Iron & Steel Control, they were able to reopen the most vital bridges to traffic at the earliest possible moment.

The type of temporary bridge to be built in each instance was determined in the light of local conditions, the urgency with which the work had to be completed, and the proposals under consideration for the new permanent bridge. In the period immediately following the liberation, the practice was to adopt whatever methods would enable these requirements to be met most rapidly. Frequently it was found that the wreckage of a destroyed bridge could be used to provide a more or less satisfactory support for the temporary structure, so long as the normal rules of bridge building were not adhered to unduly rigidly. The bridge over the Loire at Orléans was a notable example of boldness of this kind. Nevertheless, it stood up valiantly to the flood waters and ice floes of the Loire, until it was finally dismantled a few months ago. The bridge over the Rhône at Lyon-Perrache showed how it was possible to make use of the dismantled superstructure of the destroyed bridge to provide an intermediate support for the temporary bridge.

The piers were built up of wooden trestles, on occasions to a considerable height, such as those of the Vézeronce viaduct on the line to Geneva, which carry both the ends of an original span which has been re-used, and also the temporary superstructure. In other places, light steel trestles were built up on the main foundations of the piers to be rebuilt and, subsequently, were encased by the masonry of the piers forming the new permanent structure, as, for example, in the Canardière viaduct, near Chantilly, on the main line from Paris to Calais.

At a later stage supplies of steel trestles were received from Britain, which provided the means of constructing a more satisfactory type of bridge, such as the Argenteuil-Orival. The foundations were built of piles capped with reinforced concrete slabs. This method facilitated pile-driving, without restricting siting of the piles to narrow limits, to which it would have been difficult to adhere on account of the wreckage at the site.

Once the most urgent routes had been reopened to traffic, it became the practice, in constructing temporary bridges, to give considerable weight to the requirements of the permanent bridge due to be built at a later date, so long as this did not seriously delay the provision of the temporary bridge. Whenever possible, the temporary bridge was built for a single track, or for two tracks inter-laced, so as to allow the permanent bridge to be built in two halves—one side at a time—and the tracks transposed; this practice was generally followed in the case of bridges built of masonry or reinforced concrete. Sometimes even the emergency bridge was built to allow complete reconstruction of the piles, such as the large bridge over the Loire at Montlouis, near Tours. This bridge, with its two arches (each of 90-ft. span), was built of continuous beams, all of similar section, so that, once the line had been restored to traffic by using the débris to form supports for the beams, fresh intermediate supports—also of a temporary character—could be built.

When the nature of the wreckage, such as twisted steelwork, precluded this procedure, or to meet the requirements of the new permanent bridge, the engineers did not hesitate to construct a deviation in the alignment.

As a result of the speed with which work was pressed forward, 1,450 temporary bridges had been reopened to traffic by the end of 1944. Nevertheless, piles in the rivers needed close and constant watching; there were hindrances to navigation; and, above all, there were speed restrictions on trains, which both lengthened journey times and increased coal consumption. On January 1, 1945, speed restrictions over temporary bridges, throughout the system as a whole, were involving consumption of approximately an additional 1,000 tons of coal per day.

### PERMANENT RECONSTRUCTION WORK

The most intricate permanent reconstruction work was that involved in the repair of steel bridges, which included, when possible without excessive expenditure, the lifting of the demolished spans.

Arc welding was widely used for repairs to minor damage to steelwork, joining of severed sections, and even the complete replacement of entire sections. In the case of old bridges constructed of iron made by the puddling process, a special technique was necessary to avoid scaling and development of deep fissures in the metal. The repair of the Oissel bridge, over the Seine, near Rouen, carried out without the suspension of traffic, was an

interesting example of the use of this technique. Use of welding, by making it possible to join sections end-on, eliminated the necessity for dismantling all the joints on lattice girder sections, which would have been essential if riveted construction were employed.

The lifting of demolished spans, even if it was not always economic, did make available the maximum amount of steel for use in reconstruction. An example of this work was the lifting of a span 246 ft. long, weighing 500 tons, at the Cubzac bridge over the Dordogne, near Bordeaux, including the restoration to its correct position of a steel pier which was torn from its base and inclined at an angle 4 deg. out of the vertical.

The solution adopted, which was a very bold one, involved the use of the span as a balance weight to pull the pier back into its correct position. The weight of the span was transferred to the front of the pier by rollers, so as to move the pier towards its correct position. The legs of the pier were then allowed to move gently back on to the bearings from which they had been torn by the collapse of the span. The lifting of the spans was based on a practice which has become traditional in France so far as rail bridges are concerned. A cantilever, placed on the truss remaining in position, was coupled by steel shackles to the fallen truss.

This, and many other bridge lifting jobs, enabled the engineers to save more than 10,000 tons of steel.

In the repair of masonry bridges, use was made of rough rubble with thick joints, so as to re-use the materials recovered from the destroyed bridges. Application of the interesting technique of expanding cement made it possible to repair local damage in the arches under pressure, and led to a re-distribution of stresses between the repaired and the sound portions of an arch.

Bridges requiring complete reconstruction were more numerous than those needing repairs. Advantage was taken, moreover, of the opportunity to improve them, and where possible preference was given to bridges of a type on which the track could be laid on ballast, thereby reducing maintenance to a minimum. The following order of preference, therefore, was adopted: masonry bridges; reinforced concrete bridges; and, lastly, steel bridges. Steel, which was in short supply, was reserved for long spans, sites where the depth of the bridge was restricted, and where the span had to be erected away from the site. This order also effected maximum economy in use of coal.

Masonry bridges were built wherever local conditions and supplies of cement permitted. As in the repair work, it was necessary for reasons of economy to combine concrete and stonework, and to confine the use of stone to exterior finishing. The large bridges over the Loire at St. Côme, at Cinq Mare, and at Montlouis were rebuilt in this way.

When it was not possible to build a masonry bridge, reinforced concrete was used as the result of experience gained. On a number of bridges it would appear that the field for reinforced concrete was capable of further expansion by improvement of the quality of the concrete and finer grading. The methods developed by Monsieur Vallette, Chief of the Bridge Division, have made it possible to prepare concrete on site with a basis of 6 cwt. of cement per cu. yd., having a resistance of 6,000 lb. per sq. in., the ratio of water to cement being 0.40.

For the new bridge over the Rhine near Strasbourg, a steel and concrete structure with an arch of 833 ft., in which the concrete would be subject to stresses of 2,700 lb. per sq. in., was to be built.

Masonry bridges and reinforced concrete bridges have both been the subject of interesting technical developments in regard to the frames for the construction of the arches. Cost of frames has been reduced from 20 to 40 per cent. by using frames built of rails bent to shape in the S.N.C.F. workshops, scaffolding built of tubes, and a cheap type of frame built in wood.

Frames for the really large arches were assembled with nails. Steel was used in large structures for trusses, with upper decking in reinforced concrete and the track laid on ballast, and for construction of web girder bridges, built of high-tensile steel, with spans up to 197 ft.

A total of 1,850 bridges had been rebuilt in their permanent form by December, 1947, representing about 75 per cent. of those destroyed.

## Questions in Parliament

### Transport Users' Consultative Committees

Major Guy Lloyd (East Renfrew—C.) on March 15 asked the Minister of Transport when the transport users' consultative committees provided for under the Transport Act were to be set up.

Mr. Alfred Barnes (Minister of Transport): I would refer Major Lloyd to the answer which I gave to Mr. Ernest Davies (Enfield—Lab.) on March 8.

Mr. Ernest Davies: Does the Minister realise the great urgency about appointing consultative committees in view of Ministerial interpretations of their responsibility to Parliament for answering questions; and the doubt which consequently exists regarding the making of representations by Members?

Mr. Barnes: I am well aware of the need for these consultative committees, and, as I have indicated, the matter is being pursued as rapidly as possible.

Mr. Emrys Roberts (Merioneth—Lib.) on March 25 asked the Minister of Transport whether he would now announce the names of the members of the Consultative Committee for Wales to be set up under the Transport Act, 1947.

Mr. Alfred Barnes stated in a written answer: As I stated on March 8 in answer to a question by Mr. J. A. Sparks (Acton—Lab.) I am about to invite nominations for the Central Transport Consultative Committee for Great Britain. I am also considering the composition of the Transport Users' Consultative Committees for Scotland and Wales.

### Glasgow-Euston Express Fatality

Mr. V. J. Collins (Taunton—Lab.) on March 15 asked the Minister of Transport if he had obtained a report on the recent Glasgow-Euston express fatality in which the engine driver had been killed; and if he would make a statement.

Mr. Alfred Barnes: I have appointed a Railway Employment Inspector to hold an inquiry into this accident, but until I have received his report I am unable to make a statement. I should like to take this opportunity of expressing sympathy with the relatives of the deceased driver and with the fireman who was seriously injured.

Mr. Collins: Has the Minister noted the report that the accident was due to the

blowing out of a furnace or boiler; and that there have been a number of complaints among engine drivers about the condition of such equipment which they are using?

Mr. Barnes: In these matters I think it advisable to wait until I have received the report of the expert inquiry.

Mr. F. J. Erroll (Altrincham & Sale—C.): Was the boiler coal fired or oil fired?

Mr. Barnes: Coal fired.

### Transport Projects in Scotland

Mr. W. Gallacher (West Fife—Comm.) on March 22 asked the Minister of Transport if he would state the number of workers employed in Scotland on building and civil engineering as projects for which he was responsible in June, 1947, and the number to be employed on such work at June, 1948, in Scotland in accordance with the proposals set out in the White Paper, Capital Expenditure in 1948, Command 7268.

Mr. Alfred Barnes stated in a written answer: In June, 1947, the number of building and civil engineering workers employed on contract work for transport in Scotland was approximately 1,500. I regret that it is not yet possible to forecast what will be the corresponding figures for June, 1948.

### Level Crossing at Conington North

Mr. David Renton (Huntingdon—Lib. Nat.) on March 15 asked the Minister of Transport whether he was aware that the level crossing near Conington North signal box had become increasingly dangerous to people working on nearby farms and local villages and to their children; that last December a farm lorry had been involved in an accident with a train; that on March 1 four German p.o.w.s had been killed and eleven injured when the lorry conveying them to work was hit by a light engine at the crossing; and would he take immediate action with the Railway Executive to prevent accidents there in future.

Mr. Alfred Barnes in a written answer stated: I am aware of these two accidents and an Inspecting Officer of Railways is holding an inquiry into the one which occurred on March 1. Until his report is received I must reserve any statement as to the circumstances. I should like, however, to express my regret at this unfortunate occurrence involving death and injury to a number of prisoners-of-war.

### Railway Storage Charges

Lt.-Commander Clark Hutchison (Edinburgh West—C.) on March 22 asked the Minister of Transport whether he was aware that firms in Edinburgh had recently received notices from the Railway Executive (Scottish Region) that charges for the letting of storage space in sheds, warehouses, and open spaces in yards were to be increased as from the term of Whit Sunday, 1948; and, in view of the fact that that position was in direct conflict with paragraph 8 of the White Paper on Personal Incomes, Costs and Prices, Command Paper No. 7321, he would use his powers under section 4 of the Transport Act, 1947, and direct the Transport Commission to stop the raising of such charges throughout the country.

Mr. Alfred Barnes in a written answer stated: The decision to make these increases in charges was taken by the railway companies with my concurrence in the autumn of last year, in connection with the raising of the general level of railway charges from October 1, 1947. The increases have not been announced previously owing to the need for detailed examination of the charges and the preparation of notices to



tenants. The answer to the second part of the question is "No."

#### Speed Limit for Heavy Goods Vehicles

Mr. M. Edelman (Coventry West—Lab.) on March 22 asked the Minister of Transport what consideration he had given to the question of introducing legislation to amend the first schedule of the Road Traffic Act, 1934, in order to provide for a maximum speed limit of 30 m.p.h. instead of the present 20 m.p.h. for heavy goods vehicles using pneumatic tyres.

Mr. Alfred Barnes in a written answer stated: As Mr. Edelman is aware, I wrote to representative organisations on March 8 explaining the consideration I had given to this matter and conveying proposals made in the light of previous consultations with manufacturers, operators, and trades unions. Further consideration must await the replies.

#### Western Highlands and Islands Services

Mr. Malcolm MacMillan (Western Isles—Lab.) on March 15 asked the Minister of Transport what financial arrangements he had made with David MacBrayne Limited for maintaining its services in the Western Highlands and Islands.

Mr. Alfred Barnes in a written answer stated: The Postmaster-General and I have entered into a supplemental agreement with David MacBrayne Limited extending the terms of the contract dated June 3 last until the end of 1948, subject to a financial adjustment to cover the performance by the company of services previously operated by McCallum, Orme & Co. Ltd. I am placing in the library copies of the agreement and of a revised schedule of services.

#### Blinds on Rail and Road Vehicles

Mr. J. A. Sparks (Acton—Lab.) on February 10 asked the Minister of Transport what was the quantity and value of materials used for curtains and blinds in railway and road passenger vehicles, and if their use was discontinued, except in railway sleeping and dining cars, what additional materials could be made available for the export trade and home market.

Mr. L. J. Callaghan (Parliamentary Secretary to the Ministry of Transport), in a written answer, stated: I have no means of ascertaining the quantity and value of materials so used throughout the country, but insofar as the British Transport Commission, the largest user, is concerned, I am bringing Mr. Sparks' question to its attention. As concerns the second part of the question, I understand that the President of the Board of Trade has no information.

#### Bengal Assam Railway Contributory Provident Fund

Lt.-Colonel Sir Walter Smiles (Down—C.) on March 4 asked the Secretary of State for Commonwealth Relations, when the balance of the money at the credit of retired officers in the old Assam Bengal Railway and present Bengal Assam Railway Contributory Provident Fund would be paid, as these retired officers now suffered considerable financial anxiety on account of the unreasonable delay.

Mr. P. Gordon Walker (Parliamentary Under-Secretary of State for Commonwealth Relations) in a written answer stated: As the Secretary of State for Air said on February 18, in answer to Mr. B. T. Parkin (Stroud—Lab.), there are special difficulties in Bengal which have caused delay in the payment of provident fund balances, though every effort is being made to overcome them. Par-

ticulars of individual cases which have been brought to my notice have already been sent to our representatives at Calcutta and Dacca for investigation, and I shall be glad to take up any cases of which Sir Walter Smiles will let me have details.

#### Wages of Staffs of Kenya Railways

Mr. H. Hynd (Hackney Central—Lab.) on March 18 asked the Secretary of State for the Colonies whether the new rates of pay and conditions of service for staffs of the Kenya railways would be made retrospective to January 1, 1946, as already announced for Uganda, Tanganyika, and Zanzibar.

Mr. A. Creech Jones, in a written answer, stated: The East Africa High Commission has not yet made any announcement of the date from which the new rates of pay will take effect.

#### Rolling Stock in Rhodesia

Squadron-Leader P. W. Donner (Basingstoke—C.) on March 10 asked the Secretary of State for the Colonies whether he was aware that at several mines in the Northern Rhodesia copper belt large quantities of blister copper were stacked outside the smelting works unable to be moved due to the shortage of trucks on the Rhodesian railways; that a further 40,000 tons awaited shipment at Beira; and what steps he proposed to take to ease that congestion.

Lt.-Colonel D. R. Rees-Williams (Parliamentary Under-Secretary of State for the Colonies): I am aware that there are considerable stocks of Northern Rhodesian copper awaiting shipment. A number of wagons has been delivered to the Rhodesia Railways from this country, and this has improved matters. There are still, however, shipping delays at Beira, but it is expected that these will have been eased by the end of April, and that the position will progressively improve thereafter. Representatives of the Ministry of Supply and the Ministry of Transport have been sent out to make a report, and this, I understand, should shortly be available. Meanwhile, some of the Northern Rhodesian copper is to be exported through Durban.

Mr. Donner: Can the Under-Secretary

say why the Government opposed the purchase of suitable railway trucks from the United States, since they would pay for themselves in a year and would afterwards earn valuable dollars for us?

Colonel Rees-Williams: In 1947, 300 wagons were provided from this country, and we are hoping for a similar number this year. We are not aware of any trucks being refused from the United States.

Mr. Donner: Is the Under-Secretary aware of the great delays which have already taken place on the railways in moving this copper due to shortage of trucks?

Colonel Rees-Williams: The main delay is in the port of Beira, which is in Portuguese territory.

Squadron-Leader E. Kinghorn (Great Yarmouth—Lab.) on March 11 asked the Secretary of State for Commonwealth Relations what steps were being taken to overcome the shortage of railway trucks on the Southern Rhodesian railways.

Mr. P. W. Gordon-Walker (Parliamentary Under-Secretary for Commonwealth Relations): The Rhodesia Railways have placed substantial orders for railway rolling stock in the United Kingdom. Some of these orders for rolling stock were completed in 1947; and every effort is being made to complete the remainder as soon as possible.

#### Mauritius Transport Investigation

Mr. Anthony Greenwood (Heywood & Radcliffe—Lab.) on March 24 asked the Secretary of State for the Colonies what action was being taken to remedy the losses on the railway system in Mauritius; what plans were in hand for the electrification of the railway from Curepipe to Port Louis; and whether the whole transport system of the island would now be investigated.

Mr. A. Creech Jones: The Government of Mauritius has for some time been giving close attention to the whole problem of rail and road transport in the island, and investigations are now being carried out by an economic commission and by the local Government's Consulting Town Planning Adviser. I am advised that electrification is impracticable.

#### Grand National Winner Carried by North-Eastern Region Van



Loading "Sheila's Cottage," winner of the 1948 Grand National, into one of a fleet of motor horse-boxes maintained by the North-Eastern Region at Leyburn, Yorks.



## Notes and News

**Port of Bristol Authority.**—A chief permanent way inspector is required for docks at Avonmouth, Bristol, and Portishead. See Official Notices on page 447.

**Clerk, Class II, Required.**—A clerk, Class II, not over 30 years of age, is required by the Kenya & Uganda Railways & Harbours for the Transportation Department for one tour of 36 to 48 months, with prospects of permanency. See Official Notices on page 447.

**Crossley Motors Dividend.**—The board of Crossley Motors Limited has declared an interim dividend of  $7\frac{1}{2}$  per cent., less tax, payable to shareholders on the register on March 29 last. Warrants will be posted on or about April 19.

**Assistant Locomotive Maintenance Engineer Required.**—An assistant locomotive maintenance engineer, not more than 42 years of age, is required by a British mining company in the South of Spain. See Official Notices on page 447.

**Entre Rios and Argentine N.E. Liquidators Appointed.**—The voluntary winding up of the Entre Rios Railway Co. Ltd. and the Argentine North Eastern Railway Co. Ltd. was approved unanimously at meetings held recently. Mr. B. H. Binder and Mr. H. J. Binder were appointed joint liquidators.

**U.S. Diesels Ordered for Argentina.**—Reuters reports from Cleveland that the Cooper-Bessemer Corporation has announced the receipt of the largest peacetime diesel-engine order it has yet received. Amounting to approximately \$3 million, the order consists of 70 Cooper-Bessemer diesels for use in 35 American-built twin-diesel locomotives recently ordered by the Argentine Government. The locomotives will be delivered in 1949 (see also our November 14, 1947, issue).

**Large Consignment of Lathes for Argentine Railways.**—A large part of an order for lathes has lately left the works of Tangyes Limited, of Birmingham, for the Argentine State Railways. This consignment consisted of two 14-in. centres double-axle roughing and finishing lathes and one 12-in. axle-ending and centring lathe weighing 40-50 tons. The former are driven by Tex-ropes through an eight-speed gearbox from a 15-h.p. motor; both the rough turning and finishing ends of the lathes are in simultaneous operation. The axle-ending and centring lathe is driven through a gearbox by a 15-h.p. motor and

a 5-h.p. flange mounting reversing motor for longitudinal quick power traverse to the headstocks; two centring spindle motors are also fitted.

**Visit to Dover and Dunkerque.**—Members of the British Railways (Southern Region) Lecture & Debating Society are visiting the port installations at Dover and Dunkerque on May 29-30. Travel will be by the night ferry and it is hoped to include a coach tour of the port of Dunkerque in the itinerary.

**London Transport Executive.**—There are vacancies for temporary general technical staff in the railway permanent way section of the London Transport Executive. The work consists of indoor and outdoor duties in connection with the installation of new tracks and alteration to existing tracks. See Official Notices on page 447.

**More Southern Region Suburban Trains.**—Four additional trains are announced by the Southern Region to serve the Bexley Heath, Woolwich, Dartford Loop, and Orpington lines during the evening peak hour. From May 31 there will be an additional train each hour in the off-peak hours and on Sundays on the Bexley Heath, Dartford Loop, and North Kent (via Greenwich) routes.

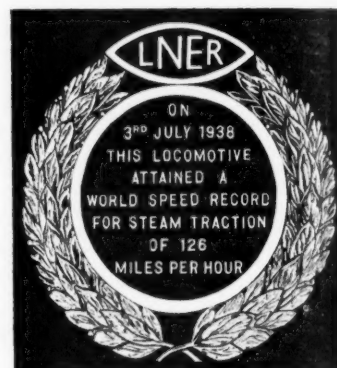
**London Transport Musical & Dramatic Society.**—At the Scala theatre, on Thursday, April 1, the London Transport Musical & Dramatic Society presented the first of three performances of Gilbert and Sullivan's "The Mikado." The production, by Mr. Cyril Coker, who also played the part of Lord High Executioner, ably incorporated the light, charming atmosphere of the opera and gave scope for the excellent performances by both the leading rôles and the chorus. Special mention might be made of Mr. Ivor Parker's performance as Nanki-Poo, and the orchestra, under the direction of Mr. H. A. Warton, A.R.C.M., contributed its full share to a most entertaining performance.

**Timber Brains Trusts.**—Two timber brains trusts have been organised recently by the Timber Development Association at the Pump Room, Bath, and the building of the Royal Institute of British Architects, London. Questions, which were answered by representatives of the T.D.A. and the Forest Products Research Laboratory, covered a wide range of subjects. At Bath one questioner, who asked for the views of the brains trust on the relative merits of wood and steel in railway carriage construction as regards safety, was told

that from the purely structural point of view timber ought to be better. The point was made that comparisons of the two materials in the past had not been on a strict weight-for-weight basis; the general conclusion was, however, that a direct comparison was undesirable, each material having its appropriate purpose. At the London session the brains trust emphasised that timber imports should not be cut and could be regarded as dollar-savers, because use of wood could in many cases release steel for export.

**Assistant Electrical Engineer Required.**—An assistant electrical engineer, between 25 and 35 years of age, is required by the Gold Coast Railways. Candidates must have served an apprenticeship with a reputable firm, including mechanical and electrical training, and have had experience in workshop and machine practice. See Official Notices on page 447.

**Plaque for World Speed Record Locomotive.**—In the forthcoming locomotive exchange trials, details of which were given in our March 26 issue, one of the engines selected to represent former L.N.E.R. express passenger locomotives will be the class "A4" streamline Pacific No. 22, *Mallard*. This locomotive, holder of the



*Reproduction of plaque fixed on each side of the former L.N.E.R. locomotive, "Mallard"*

world speed record for steam traction, having attained 126 m.p.h. hauling a test train between Grantham and Peterborough on July 3, 1938, has had plaques commemorating the event fixed on each side. The pre-war livery of garter blue, with crimson wheels, has been restored, and the tender has been lettered "British Railways."

**New "Thanet Belle" Train.**—A new all-Pullman holiday train, the "Thanet Belle," will be introduced on May 31, by British Railways, Southern Region, to run daily between London and the North Kent coast resorts. The "Thanet Belle" will leave Victoria at 11.30 a.m. Sundays to Fridays inclusive, calling at Whitstable, Herne Bay, Margate, Broadstairs, and Ramsgate. On Saturdays only, an afternoon departure will be introduced, leaving Victoria at 3.5 p.m., as there is no available "path" on Saturday mornings. The "up" train will leave Ramsgate at 5.5 p.m. on weekdays and at 6.15 p.m. on Saturdays and Sundays. The train will consist of two first and eight third class Pullman cars, with a limit of 269 seats, of which 225 will be third class; every seat will be reservable. Travel will be

### Lathes for the Argentine Railways



*A consignment of lathes for the Argentine State Railways ready for the road (See paragraph above)*

## OFFICIAL NOTICES

## His Majesty's Colonial Service

## THE COLONIAL ENGINEERING SERVICE

## Crown Agents for the Colonies

None of the vacancies on this page relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he, or she, is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

## Port of Bristol Authority

APPLICATIONS are invited for the position of Chief Permanent Way Inspector for Docks at Avonmouth, Bristol, and Portishead. Salary £420 to £465 per annum.

The position is subject to the provisions of the Local Government Superannuation Act, 1937. The successful applicant will have to pass a medical examination. Applicants must disclose whether they are related to a member or senior officer of the Bristol Corporation. Canvassing disqualifies.

Applications giving full details of previous and present positions must be forwarded to CHIEF ENGINEER, PORT OF BRISTOL AUTHORITY, Avonmouth Docks, Bristol, by May 21, 1948.

WANTED by large British Mining Company, Assistant Locomotive Maintenance Engineer for South of Spain. Applicants must have had some years experience in locomotive maintenance and must not be more than 42 years of age. The salary attaching to the post is £600-£650 per annum, with substantial additional allowances. Write stating age, whether married or single, and giving particulars of education, experience, and engineering qualifications held to D.781, c/o STREETS, 110, Old Broad Street, E.C.2.

OPPORTUNITY offers for energetic man with engineering qualifications to take up service with London railway track supply firm. Age 30 years to 40 years.—Write Box 34, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

subject to the usual supplementary charges, which in this case are 3s. 6d. first class and 2s. third, irrespective of the length of the journey.

**Queensland Railway Strike Settled.**—Mass meetings of Queensland railwaymen on April 2 unanimously accepted their leaders' advice to accept the Government's terms on pay increases which were offered two months before the strike began. The strike had lasted 61 days (see our March 5 and April 2 issues).

**Railway Rating.**—The Railway Assessment Authority and the Anglo-Scottish Railways Assessment Authority have issued the reports of their proceedings for the year to March 31, 1948. The records relating to the work of the Railway Assessment Authority under the Railways (Valuation for Rating) Act, 1930, have been transferred to the Board of Inland Revenue (Valuation Department) and that department has also taken over the Authority's office premises.

**Model Engineering Exhibition at Brighton.**—On March 31, the Mayor of Brighton opened an exhibition in the York Place school hall, organised by the Brighton & District Society of Model & Experimental Engineers. It was divided primarily into two sections—exhibits for competition and those on loan. The Mayor and Mayoress of Hove presented the 15 main prizes and numerous diplomas of merit before the exhibition closed on the evening of April 3. The principal sections were subdivided into railway locomotives and rolling stock; marine; traction, and stationary engines; aircraft; and general. There were over 50 railway exhibits, 17 of them for competition and virtually all first-class jobs. There were two multi-gauge passenger-carrying tracks on which two engines—including L.M.S.R. "5XP" Centaur, the 5-in. gauge model holding the *Model Engineer* Championship Cup, 1947, and a fine 3½-in. gauge *March Atlantic*—were constantly in steam.

There was some excellent work in the form of gauges, squares, and other precision exhibits by boys of 14 and 15, and the society specialises in training such youngsters to help them to become expert craftsmen. The Southern Region loaned models of the "Merchant Navy" and "Battle of Britain" classes of 4-6-2 locomotives, and separate parts in addition, to show the fireboxes, thermic syphons, boilers, smokeboxes, cowlings, and wing-plates and wheels—a most instructive exhibit. The local trade was well represented, and the whole exhibition most commendable. The standard of workmanship, especially in the locomotives, was unusually high.

**Export Promotion Department Change of Address.**—The Export Promotion Department of the Board of Trade (with the exception of the Exhibitions Branch) is moving from 35, Old Queen Street, S.W.1, with effect from April 3, to Thames House North, Millbank, London, S.W.1; the telephone number (Victoria 9040) remains unchanged, but the telegraphic address is altered to Advantage, London. The Exhibitions Branch, which among other work deals with the British Industries Fair, remains for the time being at the old address (35, Old Queen Street), with, however, the new telephone number of Abbey 9040.

**Control of Iron and Steel.**—In accordance with arrangements announced by the Paymaster-General on December 5, the Control of Iron & Steel (No. 63) Order, 1948, operative from April 1 inclusive, cancels all outstanding "M" forms and all outstanding orders covered by "M" forms for iron and steel, other than sheets and tin-plate, terneplate, blackplate, etc., as specified in the Order. Consumers, the Ministry of Supply states, should already have received the new I.S. authorisations or sub-authorisations from their customers for their requirements from April 1. The Order provides for the exemption from cancellation of authorisation for work

completed or in progress, but not delivered by March 31, in approved cases. Arrangements have already been made for a limited number of such exemptions. Where such exemptions have not been notified, consumers, it is stated, must authorise under the new I.S. authorisation any order for delivery after March 31. Copies of the Order are obtainable from H.M. Stationery Office, price 1d. each.

**Weekly Manchester-London-Rome Air Service.**—A weekly air service between Manchester, London, Milan, and Rome was inaugurated this week by Italian Air Lines (Alitalia), with British European Airways as agents in this country. By the timetable announced, aircraft will arrive at Ringway Airport, Manchester, at 4 p.m. on Wednesdays, leaving for Italy at 11.50 a.m. on Thursdays.

**Southern Region Easter Traffic.**—For the five days March 25 to 29 a high standard of punctuality was maintained by Southern Region trains, the average late arrival for all trains being 1.4 min. Passengers conveyed on main-line trains from London termini on Thursday, Friday, and Saturday increased by 18.9 per cent. compared with the corresponding days last year, the figures being 266,883 and 224,506. For the boat race, 12,000 passengers were conveyed to riverside stations.

**Brussels International Industries Fair.**—At the request of the exhibitors, the duration of the Brussels International Industries Fair has been reduced this year from 16 to 12 days. The fair, which is being held from April 17-28, is intended to bring buyers and sellers into contact, rather than be a public exhibition, and for this reason sightseers will be admitted only on Sundays and in the afternoons. The fair will cover a floor-space of about 88,000 sq. yd. and the number of participants is expected to be over 3,500, representing 30 nations; 14 foreign governments will be officially represented. A foyer for foreign buyers is to be provided. The representation of British manufacturers occupies third place

**LONDON TRANSPORT EXECUTIVE.**—Vacancies exist for temporary General Technical Staff in the Railway Permanent Way Section. The work consists of indoor and outdoor duties in connection with the installation of new tracks and alteration to existing tracks. Applicants should be preferably Students or Associate Members of the Institution of Civil Engineers or University Graduates. Salary up to £530 per annum according to age, experience, and qualifications. Applications giving details of age, qualifications, and experience should be sent to the STAFF OFFICER (ER/E. 472), LONDON TRANSPORT EXECUTIVE, 55, Broadway, London, S.W.1, so as to be received not later than April 30, 1948.

among overseas participants, with 236 exhibitors, covering a variety of industrial groups; it is intended to organise a British day on April 19.

**Engine Derailed by Obstruction on Cardiff-Birmingham Line.**—A Cardiff-Birmingham express was held up for five hours by a fall of rock on the line near Lydney, Glos., during the sudden gale on March 31. The rock was wedged between the bogie wheels of the engine, which was derailed; the nine coaches were not derailed, but the track was damaged. Coaches were drawn back into Lydney Station, and the train continued with another locomotive on the single line to Birmingham.

**Sources of Waste Paper Recovery.**—A series of suggestions for increasing paper salvage issued by the Waste Paper Recovery Association Limited, reminds business houses of the possibilities presented by back numbers of trade journals, bulletins, and price lists. The proposal is made that these should be sent to salvage after a period of six months or so, as it is always possible to consult publishers' files in case of emergency. The statement emphasises that 100,000 tons of waste paper are needed by July if further cuts in supplies are to be avoided.

**Restrictions on Rail Traffic to Berlin.**—Sudden introduction of new traffic regulations by the Russian occupying authorities in Germany on April 2 held up all British and American rail transport by the corridor through the Russian zone which connects Berlin with the western zones. Passenger trains were delayed for long periods at Marienborn, on the Soviet side of the zone border, where Russian guards declined to allow trains to proceed unless they were allowed to board them and inspect passengers' papers; permission was refused in all but one case, where it is said that British orders were not correctly observed by the train commander. Goods traffic was also stopped and large-scale air transport was arranged by the British and American authorities. Freight trains were resumed on April 4, however, and on the same day a train carrying the British Military Governor, General Sir Brian Robertson, and the Secretary for Air, Mr. Henderson, was treated by the Russians as a special case and reached Berlin without incident.

### Forthcoming Meetings

- April 12 (Mon.).—The Institute of Transport at the Institution of Electrical Engineers, Savoy Place, London, W.C.2, at 5.30 p.m. "The Future of British Ports and Canals," by Mr. W. A. Flere, A.M.Inst.T.
- April 14 (Wed.).—The Institution of Locomotive Engineers, at the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1, at 5.30 p.m. Annual general meeting. "Notes on Railway Standards," by Mr. T. T. Lambe, Associate Member.
- April 16 (Fri.).—The Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1, at 5.30 p.m. Discussion on "The mobile locomotive testing plant of the L.M.S.R.," by Dr. H. I. Andrews, Ph.D., A.M.I.Mech.E.
- April 17 (Sat.).—The Permanent Way Institution, Manchester & Liverpool Section, at the Temperance Institute, 65, London Street, Southport, at 2.45 p.m. Lantern lecture: "Erection of Girder Bridges," by Mr. H. Wyles, A.M.Inst.C.E., A.M.I.Struct.E.

## Railway Stock Market

Sir Stafford Cripps' Budget and review of the economic state of the nation have emphasised the vital tasks that have to be faced. At the time of writing, stock markets are reflecting some relief that the great uncertainty as to the Budget proposals, which has held business in check for some weeks, has now been removed. Leading industrials are being favoured, particularly where the companies are prominent in the export drive, and where there is a large margin of earnings over dividend payments. With last year's dividends now the maximum rates which can be expected, the view is current that many industrials may become more like preference than equity shares. It should not be overlooked, however, that the actual rate of dividend earned is likely to play an important part in influencing the market value of individual shares, as was the case during the war, when 100 per cent. E.P.T. ruled. At the time of writing best levels have not been fully held, but leading industrials have moved higher on balance.

Under the impact of the issue terms of 3 per cent. British Electricity stock (1968-73), and the discount immediately established in initial dealings, the long-dated 3 per cent. Transport stock (1978-88) fell sharply below 97, but at the time of writing has made a partial recovery to 96½. Electricity supply shareholders have had the same disappointing experience as railway stockholders, because in addition, to the big loss of income involved by the terms of exchange into gilt-edged, they have had to face a fall in price to a discount immediately dealings began. It is true that, in conformity with the stipulations of the Act, the terms of British Electricity stock were based on the existing conditions ruling in the gilt-edged market. But as in the case of Transport stock, although legally correct, it has been overlooked that there was an implied moral obligation for the terms of issue to

be such as to ensure as far as possible that the new stock would keep around par at least for a moderate period. Coincident with the new Electricity stock has been issued the new 3 per cent. Transport (Wagon) stock, redemption dates also being 1968-73. This stock is being exchanged as compensation for privately-owned railway wagons. When it is remembered that the redemption dates of the Transport stock issued to railway stockholders was 1978-88, not only is the big change which has taken place in the gilt-edged market in the space of four months brought home, but also the unfair treatment accorded railway stockholders.

There was only moderate business in the foreign railway market. Argentine ordinary and preference stocks were all virtually the same as a week ago, although Buenos Ayres Western strengthened. San Paulo, at 167½, was higher on balance on the assumption that the Anglo-Brazil financial talks must have included fixing a date for payment of the agreed sum for the San Paulo Railway. Leopoldina issues kept active, but moved slightly lower on balance, the ordinary stock being 14½, the preference 45, and the 4 per cent. debentures 73½. Leopoldina Terminal 5 per cent. debentures were 70. Antofagasta ordinary and preference, at 11½ and 60 respectively, have been steady. United of Havana 1906 debentures attracted speculative support and rallied to 16½. Manila Railway debentures have improved further to 95, and the preference shares to 9s. 6d. on continued talk that a deal may be effected in respect of the company's holding of Manila Railroad bonds. Canadian Pacific, at 19½, responded to the increase in freight rates. The preference stock was 78 and the debentures 109½.

At the time of writing iron and steel shares have been steady with United Steel at 29s. 3d. and Dorman Long 31s. 3d. Following publication of the full results, North British Locomotive were 25s. Vulcan Foundry have changed hands around 30s.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffic for week		No. of Week	Aggregate traffic to date	
				Total this year	Inc. or dec. compared with 1945/46		Total 1947/8	Increase or decrease
South & Central America	Antofagasta ...	834	28.3.48	£ 40,750	— £ 2,170	13	£ 663,780	+ £ 177,950
	Bolivar ...	174	Feb., 1948	887,758	+ 825,850	9	8186,305	+ 842,372
	Brazil ...	—	—	—	—	—	—	—
	Cent. Uruguay ...	970	27.3.48	32,164	— 15,455	39	1,358,887	— 95,438
	Costa Rica ...	262	Feb., 1948	29,822	— 208	35	266,961	+ 46,589
	Dorada ...	70	Feb., 1948	16,700	— 12,900	9	39,800	— 20,500
	G.W. of Brazil ...	1,030	27.3.48	31,300	— 4,300	13	493,800	+ 100
	Inter. Ctl. Amer. ...	794	Feb., 1948	\$1,144,611	— \$ 1,242	9	\$2,402,164	+ \$74,903
	La Guaira ...	22½	Mar., 1948	\$123,329	— 86,679	14	\$291,639	+ \$63,436
	Leopoldina ...	1,918	27.3.48	54,193	— 4,942	13	680,178	— 122,710
	Midland Uruguay ...	319	Feb., 1948	16,405	+ 8,378	35	143,912	+ 10,100
	Nitrate ...	382	31.3.48	15,990	+ 5,202	14	72,991	+ 23,665
	N.W. of Uruguay ...	113	Feb., 1948	5,261	+ 1,916	35	40,635	+ 3,127
	Paraguay Cent. ...	274	26.3.48	59,744	+ 3,179	39	2,558,422	+ 690,167
	Peru Corp. ...	1,059	Mar., 1948	168,201	+ 13,122	39	1,527,280	+ 170,666
Canada	Salvador ...	100	Jan., 1948	c350,000	+ c85,000	30	c1,072,600	+ c187,600
	San Paulo ...	153½	—	—	—	—	—	—
	Taltal ...	156	Feb., 1948	8,995	+ 6,125	35	58,605	+ 23,900
	United of Havana ...	1,301	27.3.48	109,226	+ 3,823	39	2,743,707	+ 416,091
	Uruguay Northern ...	73	Feb., 1948	1,261	+ 481	35	9,057	— 965
	Canadian National ...	23,535	Feb., 1948	8,504,250	+ 737,250	9	17,004,750	+ 1,023,250
Various	Canadian Pacific ...	17,037	Feb., 1948	6,071,500	+ 812,750	9	12,303,000	+ 1,204,500
	Barsi Light ...	202	Feb., 1948	20,445	+ 772	48	270,367	+ 24,825
	Beira ...	204	Jan., 1947	116,310	+ 29,791	18	469,223	+ 113,551
	Egyptian Delta ...	607	29.2.48	18,538	+ 4,573	48	569,862	+ 48,579
	Gold Coast ...	536	Dec., 1947	204,032	— 8,365	39	1,392,691	— 230,301
	Manila ...	—	—	—	—	—	—	—
	Mid. of W. Australia ...	277	Jan., 1948	27,029	+ 9,233	31	162,529	+ 43,451
	Nigeria ...	1,900	Jan., 1948	521,787	+ 59,708	44	3,899,303	+ 20,011
	Rhodesia ...	2,445	Sept., 1947	643,980	+ 102,833	52	6,787,603	+ 612,958
	South African ...	13,323	13.3.48	1,329,444	+ 66,710	50	63,133,522	+ 5,335,010
Victoria ...	4,774	Dec., 1947	1,450,410	+ 164,100	26	—	—	

† Receipts are calculated at 1s. 6d. to the rupee